

# AVASCULAR NECROSIS



**Advanced Treatment Options  
At Affordable Cost**



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## OVERVIEW

Bone is a living tissue and it needs blood supply to live. When there are interruptions or stoppages of blood supply to the bone tissues, bones may collapse and the joint may get dislocated. This condition is called Avascular Necrosis.

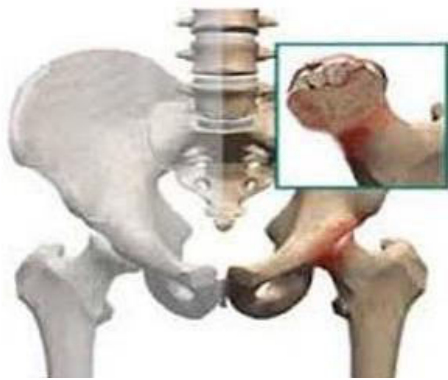
Mostly, hip joints are the affected. Sometimes shoulders, knees or ankles may get affected too. Avascular Necrosis at the jaw is also known to happen.

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## SYMPTOMS & CAUSES

### Causes:

This happens due to underlying health problem, prolonged use of inflammation-fighting drugs or injury. Sometimes, the fat (lipids) can block small blood vessels, reducing the blood flow that feeds bones.



### Symptoms:

There are no early symptoms. Pain increases with time. Initially, the pain may appear only when put pressure on the bone. Gradually, the pain becomes constant until the bones in the surrounding joint collapse which results in severe pain and restricted joint movement. The time between the early stage and collapse of bone may be between few months to more than a year.

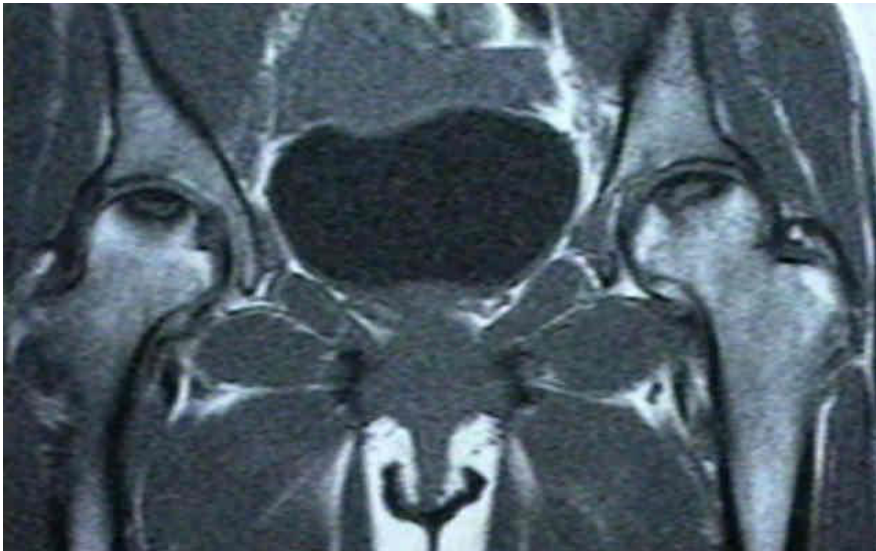


## DIAGNOSIS & TREATMENT

### Diagnosis:

Visit a doctor for the slightest uneasiness with the above symptoms. The doctor, during a physical exam will check for tenderness around the joint. This can be done by pressing the joint and by asking the patient to move the joints through a variety of positions.

In order to check the source of the pain, various imaging tests may be required.



MRI Image

In the early stages, the bone changes may not be detected by **X-rays**. X-rays can only reveal bone changes that occur in the later stages of avascular necrosis. However, **MRI and CT scan can** produce detailed images that may indicate avascular necrosis.



Bone Scan

A very sure way to diagnose avascular necrosis is **Bone scan**. This is done by injecting a small amount of radioactive material into the vein. This material travels as a tracer, to the parts of your bones that are injured and shows up as bright spots on the imaging plate.

**Treatments:**

Treatment of Avascular Necrosis depends on various factors like the age of the patient, stage of the disease and the cause and extent of bone damage. Only about 20% of cases are successful with non-operative treatments.

**Non-operative treatment** includes *Medication* and *Therapy*.

**Medication** may be with **Osteoporosis drugs, Blood thinners, Cholesterol-lowering drugs, Non steroidal anti-inflammatory drugs.**



**Therapy** can involve **Rest, Exercise or Electrical Stimulation.**

**Surgical treatment** may be with one of the following:

**Joint replacement, Bone transplant (graft), Bone reshaping (osteotomy), Core decompression, or Regenerative medicine treatment.**



**Joint Replacement** : When other treatment options are not helping because the bone has already collapsed beyond repair, you might need surgery to replace the damaged parts of your joint with artificial joints.

**Bone transplant (graft)** : The grafting is done with a bone taken from another part of your body. This procedure may help to strengthen the area of bone affected by avascular necrosis.

**Bone reshaping (osteotomy)** : **To help shift off the damaged bones**, a wedge of bone is removed above or below a weight-bearing joint. Bone reshaping might help to postpone joint replacement.



**Core decompression** : Treatment in early stage is possible with Core decompression. This consists of relieving the pressure on the blood supply by removing part of the inner layer of your bone. The extra space within the bone helps production of bone tissues and new blood vessels.

**Regenerative medicine treatment** : First, stem cells are harvested from bone marrow. During surgery, the core of dead hip bone is removed and stem cells inserted in its place for growth of new bone.

**Fibular Bone Graft** : This is a more complicated procedure to increase the blood supply to the femoral head. This is actually a tissue transplant. The graft is taken from the *fibula* (the thin bone that runs next to the shin bone). The graft is *vascularized*, to have a blood supply of its own and then a hole is drilled through the side of the femur and into the femoral head. The surgeon attaches the blood vessels from the fibula to one of the blood vessels around the hip. This procedure helps to bring blood flow to the femoral head through the bone graft, and keeps the femoral head from collapsing as the bone heals itself.



FOR DETAILED INFO ON HIP JOINT REPLACEMENT, VISIT : [HIPREPLACEMENTSINDIA.COM](http://HIPREPLACEMENTSINDIA.COM)

## FAQS



### **1. What is Avascular Necrosis?**

When there are interruptions or stoppage of blood supply to the bone tissues, bones may collapse and joint may get dislocated. This condition is called Avascular Necrosis.

### **2. What are the common areas affected by Avascular Necrosis?**

Avascular Necrosis is most common in the hip and the shoulder. However, it can affect other large joints as well, such as knee, ankle, elbow and wrist.

### **3. Who is at risk of Avascular Necrosis?**

If a person is completely healthy, the risk of getting Avascular Necrosis is quite less. Most patients are between 20 and 50 years old. Patients over the age of 50 are prone to have developed AVN either by a fracture of the hip or sometimes due to disease of the major blood vessels in the lower leg.

### **4. Is surgery the only treatment for Avascular Necrosis?**

Medication and Therapy has shown to have about 20% success rate. Whereas, surgery has a much higher rate of success.

### **5. When do I need to go for surgery for Avascular Necrosis?**

Consult a doctor. The earlier it is detected better is the treatment outcome. It is better to take precautions and guidance from the specialist doctor.

## 6. What is the recovery period in case of surgery for Avascular Necrosis treatment?

Recovery depends on the individual and type of surgery carried out. It's important to follow the advice the surgeon gives you on looking after your hip. For hip replacement, a generally fit person can walk on the first day of the surgery and may be released between one to three days of the surgery. You can stop using walking aids by four to six weeks and feel normal after two or three months. For Bone reshaping (osteotomy), Regenerative Medicine Treatment or Fibular Bone Graft, the hospitalization period can be for several days. Recovery can take up to 15 to 16 weeks.

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## TESTIMONIAL



### Patient 1 :

I am 65 yrs old. I was on verge of doom since my movements were reduced to bedroom and bathroom due to my joint pains in the hip and difficulty in walking.

Medication and therapy helped temporary relief but my quality of life was getting worse by each day. I knew, I had to undergo surgery and that is then I got confidence when I spoke to Dr Santosh Kumar.

I underwent Hip Replacement surgery and was surprised to know that it was just a matter of a day and a half stay in the hospital. The post-operative support from the team was amazing and the follow up treatment was effective. I am one year into the surgery and I am able to play with my grandchild today. Thanks to Dr.Santosh Kumar & his team.

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An injury during my college days was left unattended and it was a late detection of **Avascular Necrosis**. **My active life was getting affected. I couldn't imagine a life where I wouldn't be active and having fun. I was suggested a Hip Surgery. When I consulted Dr Santosh Kumar, it gave me confidence to undergo surgery. The recovery was quick & smooth.**

**The post-operative guidance from the staff team was almost like being treated at home. Two years after the operation, I am going for a bi-cycle trek this month.**

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## **SPECIALIST DOCTORS**



Dr. Santosh Kumar MBBS, D.Ortho, is a certified orthopedic surgeon, with expertise in treatment of Avascular Necrosis. He is also focused on Knee, Hip & Spinal Surgeries, Osteotomy, Joint replacement and preservation, Arthroscopy, Minimally invasive joint replacement ; joint replacement revisions, etc

### **QUALIFICATION ::**

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

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 :**

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.

**BONE BANK JIPMER :**

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.

**REGISTRAR 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. Medtronics 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

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 Medtronics 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 annul 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

### **ABOUT :**



Poorva International Orthopaedic Foundation was founded by Dr. Santosh Kumar, an eminent Orthopaedic Surgeon, as a non profit organization whose primary function is to effectively promote, support, develop and encourage research and education concerning minimally invasive orthopaedic surgery and advancements in musculoskeletal diseases. The Foundation is additionally committed to initiatives that educate individuals of all ages who are passionate about a healthy and active lifestyle and engage in self directed practices to maintain that lifestyle. The aim of the Foundation is to discover new modalities for the

treatment of orthopaedic injuries and musculoskeletal disease, to promote injury prevention, and to explore minimally invasive treatments that guarantee shorter recovery time and faster return to daily activities. The Foundation presently renders service in Eastern Indian States like West Bengal, Orissa, Bihar, Jharkhand, the north eastern states of India, Bangladesh and Indians / Expats living in USA, UK, Australia, Middle East, etc

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**COST & FINANCE**



**COST :**

The costs involved in OPD [ Out Patient Department ] are as below :

<b>Particulars</b>	<b>For Indian Patients Price In Indian Rupees.</b>	<b>For International Patients. In US Dollars .</b>
One Time OPD Consultation on Medical Camp Days	FREE	FREE
One Time Online Consultation on Medical Camp Days	FREE	FREE
Email Consultation with Dr.Santosh Kumar	Rs 300	\$ 5
WhatsApp Consultation with Dr.Santosh Kumar	Rs 400	\$ 6
Video Consultation with Dr.Santosh Kumar	Rs 500	\$ 8
OPD Consultation with Dr.Santosh Kumar in person	Rs 600	\$ 10
Priority Consultation with Dr.Santosh Kumar in person	Rs 750	\$ 12
Consultation for Corporate / Institutions / Societies	Rs 1,000	\$ 16
Consultation for Government Bodies / Charities	FREE	FREE

**CAHLESS TREATMENT, INSURANCE & MEDICLAIM :**

Patients can avail Cashless Treatment, Insurance or mediclaim facilities whatever is applicable. Major Insurance plans are accepted here.

## FINANCE :

For the benefit of our those patients & clients who do not have health Insurance, we have tied up with some banks & financial institutions that offer Medical Loan / Personal Loans for treatments with us. This covers the OPD consultation, diagnosis, procedure, medicine, etc. A personal loan is one of the best ways to pay for the medical treatment. There are no collateral or down payment required and the money you receive can be used to pay for the procedure itself, along with any unexpected fees.



They advise, in order for your loan application to have the best chance for success, you need to have the following documents ready when you apply: Income proof, ID proof, Address proof.



At present this facility is available for Indian Patients only.

For more details, pl call us at **+91-9836365632**



## CONTACT

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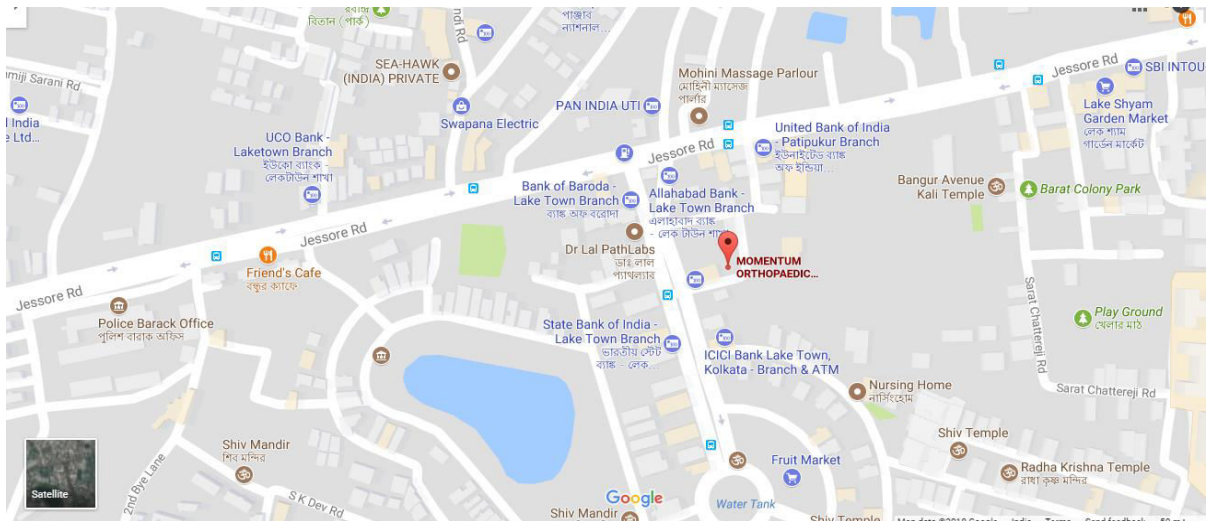
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**Having Any Doubt On  
Avascular Necrosis ?  
Ask To Dr. Santosh !**



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