



THE ORTHOPAEDIC SPECIALITY CLINIC

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A PATIENT'S GUIDE - TOTAL HIP REPLACEMENT

What is hip arthritis and what causes it ?

The hip joint is a ball and socket joint that connects the pelvis and upper body to the lower limbs. The socket (acetabulum) lies in the pelvis, and the ball is the head of the femur (thigh bone). Damage to this joint results in 'arthritis'.

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- **Avascular Necrosis:** Disruption of the blood supply of the 'ball' or femoral head
- **Developmental Dysplasia:** Abnormal development of the hip joint since birth
- **Inflammatory Arthritis:** Conditions such as Rheumatoid Arthritis, Ankylosing Spondylitis
- **Post-traumatic:** Following fractures of the ball or socket of the hip joint
- **Primary:** Age related wear and tear of the lining of the joint (cartilage)

Normal hip joint



Arthritic hip joint





What is Total Hip Replacement (THR) ?

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THR is surgical replacement of the diseased and arthritic socket (acetabulum) and the ball (femoral head) with artificial components. The acetabular cavity is reshaped to accept a shell. This shell will accept either a poly (plastic) or a ceramic liner. The diseased femoral head (ball) is cut-off from the femoral shaft and replaced with a metallic component.



When do I require a THR ?

Non-surgical treatment for arthritis in the form of walking aids, medication, physiotherapy and injections is advised in the initial stages of hip arthritis. If the disease is advanced or there is unfavorable response to non-surgical treatment, then surgical treatment is warranted. Unrelieved pain, limitation of movement, deformity and limb length inequality are the main reasons to suggest surgical treatment.

What are the different types of THR ?

Several designs of THR implants are available. Generally, these implants are categorized on the basis of how they are fixed in the bone, and by the bearing material.

As per the fixation modality, they are classified as :

A) Uncemented

The implant surface is coated with special materials which allow it to attach to the bone surface, called osteointegration. They are ideally used when the patient's bone quality is good. The process of osteointegration occurs over a period of time.

B) Cemented

The implant is fixed to the bone using a special grout called a 'Bone Cement'. The bone cement allows complete fixation of the implant at the time of surgery itself. This type of implant is generally used when the bone quality is compromised due to age or disease.



Additionally, there are different **bearing surfaces** for the acetabular cup liner and femoral head that can be used. The femoral head (ball) is available in Cobalt-Chromium, Oxinium and Ceramic. The acetabular (socket) liner is available in Poly, Vitamin-E enriched Poly and Ceramic. Thus, the combinations may be made by combining either of the two. Generally, in a younger and a more active patient, a Ceramic-Ceramic or Ceramic-E Poly or Oxinium-E Poly is preferred. This is owing to the increased longevity of these articulations.

Different Bearings



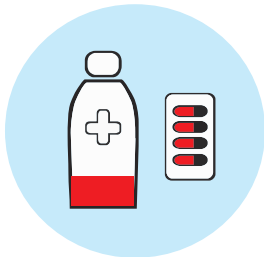
What happens during Hip Replacement Surgery ?

The operation is performed under anesthesia. You may be administered general anesthesia or epidural anaesthesia. The procedure usually takes about an hour. A cut given on the side or on the front of the hip joint. The diseased joint is replaced with the artificial components. At the end of the surgery, the wound is closed with self dissolving sutures or by staples. At this time anesthesiologist administers a long term pain relieving 'block' injection to allow a smooth painless operative recovery.

What are the preparations required before surgery ?

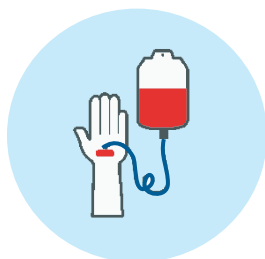
Preparing for your surgery - Preparation for your total hip replacement surgery begins several weeks before the date of the surgery itself. To begin with, you will be asked to keep the following appointments :-

- A) Pre-admission testing:** This consists of a physical examination and a series of tests (X-rays, blood work, etc.) that will be performed in preparation for your surgery.
- B) Medical clearance for surgery:** Medical approval for undergo surgery is required from your primary doctor – or we can arrange for you to be examined by one of our doctors. This examination, in combination with pre-admission testing, is necessary to review your overall health and identify any medical conditions that could interfere with your surgery or recovery.
- C) Watch your weight:** If you are overweight, losing weight will help reduce stress on your new joint. (If your weight is normal, keep it that way.)
- D) Have a dental examination:** Although infections in joint replacements are not common, it can occur if bacteria enter the bloodstream from somewhere else in your body. Therefore, you should arrange to have dental procedures such as extractions and periodontal work completed before your surgery.
- E) Medical Insurance:** Check with us if you have medical insurance. All hospitals do not carry all insurances. Also discuss with your insurance agent for inclusions and exclusions prior to admission.



Stop taking certain medications:

You must disclose your past medical history and also share the names of the medicines that you have been taking.



Consider pre-donating blood for transfusion :

If we determine that your operation may require a blood transfusion.



Stop smoking :

This is a good idea at any time, but particularly cessation of smoking before surgery is useful to reduce the risk of post operative lung issues and to improve wound and health.

How long does a replaced joint last ?

A well performed Total Hip Replacement surgery has a mean survival of >90% at 10 years, >85% at 15 years and >77% at 25 years, for all factors combined. The longevity depends on several factors including the age at surgery, indication for the THR, bone quality, post-operative activity level, etc.

How long will be my hospital stay and how much pain will I have ?

The total duration of the hospital stay for a THR is about 3-4 days. Admission may be done a day prior to the surgery. A drain is placed inside the joint to remove any collected blood. After the surgery, physiotherapy is started on the same day itself with gradual increase in activity. You will be discharged once the drain is removed and physiotherapy has progressed such that you can take care of your daily needs at home, like using the commode and sitting on a chair. Pain control after surgery is done via multiple methods including epidural infusion, nerve block, intravenous pain killer, transdermal patches and oral medicines. The pain is not very severe, although some discomfort at the operative site may persist for 2-3 weeks.

Will I require Physiotherapy after THR ?

Physiotherapy is started in the hospital right after the surgery. It progresses from bed-side sitting to standing and walking over 4-5 days, based on patient's comfort and tolerance. The physiotherapist will also take you through 'hip precautions' or activities that must be performed with care such as turning in bed, sitting and sleeping. After discharge, physiotherapy under supervision of a therapist will be required at home for about 1 month. This is important to regain muscle strength, balance and flexibility.

How 'normal' can my life become after the surgery ?

The primary goal of a THR is to provide pain relief. This is reliably achieved after surgery. Activities of daily living such as driving, walking, using any household equipment, office-work can all be performed with ease and without any pain. Sexual activity can be normal after the surgery as well.

How 'normal' can my life become after the surgery ?

What will be the activity restrictions after my THR ?

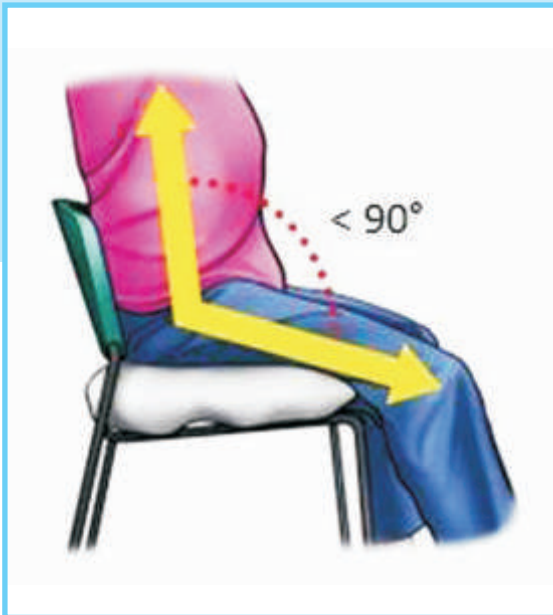
A THR surgery will allow you to perform all activities of daily living without pain.

Activities such as squatting, cross-leg sitting (lotus position) or using an Indian type commode are to be performed with caution.

For the first 3-4 weeks following surgery, you will be advised to use a pillow in between your legs. This places your operated leg in abduction.

This position prevents the risk of your operated leg accidentally crossing over to the other side. This is important until the soft tissues (muscles, capsule) heal securely. Turning to the same side of the surgery is best avoided for the first 3 weeks. While turning to the opposite side, two pillows should be used in between the legs to maintain abduction.





During sitting, do not bend your operated hip more than 90 degrees



Do not cross the operated leg whilst sitting



Do not bend in your operated hip forwards to pick up objects from the floor



Do not rotate your operated leg inwards during standing

Are there any complications after THR ?

As with any surgical procedure, some complications are inherent to a THR. The incidence of these complications is very low and preventive measures are taken in every surgery to mitigate their risk and incidence.

1. Bleeding- may require blood transfusion.
2. Deep Vein Thrombosis - blood thinners and compression stockings are routinely used for all patients.
3. Limb length discrepancy- special care is taken during surgery to equalize limb lengths.
4. Infection- OT sterility is ensured and preventive antibiotics are given before and after surgery to all patients. All potential sources of bacterial contamination such as urinary, dental and skin foci are routinely screened prior to surgery.
5. Dislocation- The ball can sometimes jump out of the socket. Most dislocations occur if the patient is not compliant with the 'hip precautions' in the post-operative period.
6. Neurovascular injury- This rare complication may occur if the hip joint is very scarred or is very shortened due to previous disease.

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In case of any EMERGENCY call : 91750 18871

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Pune - 411 004

Camp Clinic :

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Next to Ruby Hall Clinic,
Lane Before Gold Field Plaza,
Sassoon Road,
Pune - 411 001



Patient education initiative by "Tapasvi Charitable and Medical Center"