



*Health is for growth*

# Total

## **Hip Replacement Surgery.**



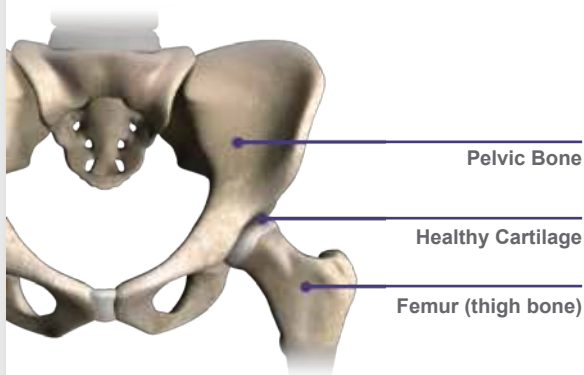
# Know About

## Your Hip Joint

### A Normal Hip

A smooth, plastic-like lining called cartilage covers the ends of the bones and prevents them from rubbing against each other, allowing for flexible and nearly frictionless movement. Cartilage also serves as a shock absorber, cushioning the bones from the forces between them. Finally, a soft tissue called **synovium** lines the joint and produces a lubricating fluid that reduces friction and wears.

### Normal Hip



# Hip

## Pain

Your joints are involved in almost every activity you do. Movements such as walking, turning, and bending require the use of your hip and knee joints. When your hip becomes diseased or injured, the resulting pain can severely limit your ability to move and work.

### Understanding Arthritis Better

#### Osteoarthritis

Osteoarthritis (OA) is sometimes called degenerative arthritis because it is a "wearing out" condition involving the breakdown of cartilage and bones. With osteoarthritis, the cushioning cartilage at the end of the femur may have worn down, making movements painful as bone rubs against bone.

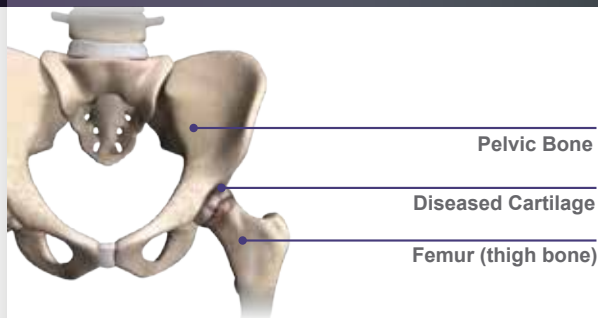
#### Rheumatoid Arthritis

(RA) is an autoimmune disease in which the body's immune response negatively affects the lining of the joints (called the synovial membrane), causing chronic inflammation and pain.

#### Post-traumatic Arthritis

Avascular Necrosis (AVN) results when a bone is deprived of its normal blood supply. Without proper nutrition from the blood, the bone's structure weakens, may collapse, and damage the cartilage.

### Arthritic Hip



# Treatment

## Options for Hip Pain



Physical  
Therapy



Diet and  
Exercise



Walking  
Aids



Medications  
NSAIDS Cortisone,  
Joint Fluid Therapy



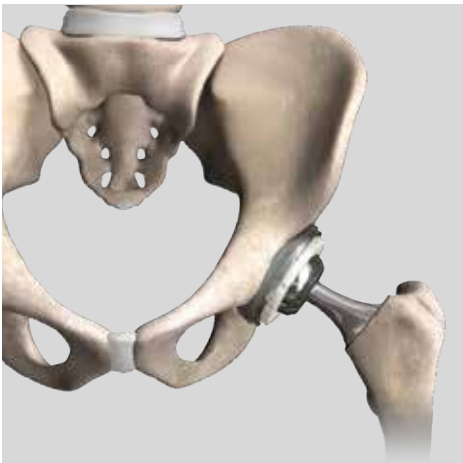
Hip  
Replacement  
Surgery



Heat or  
Cold  
Therapy

### Hip Replacement Surgery

Total Hip Replacement (THR) surgery involves the removal of arthritic bone and damaged cartilage, and replacing them with hip implants that are designed to replicate the hip joint.



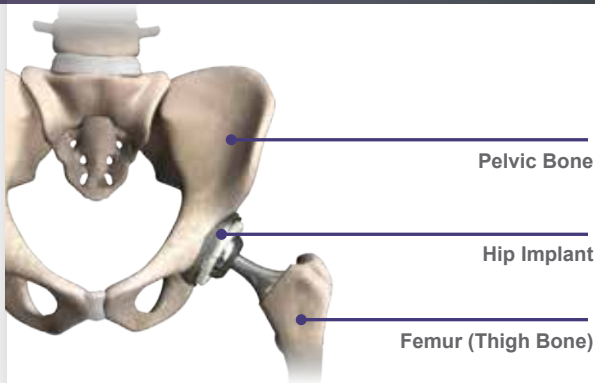
# When do you need A Hip Replacement Surgery?

If you haven't experienced adequate relief with conservative treatment options, like heat or cold therapy, medication, or joint fluid supplements, your doctor may recommend total hip replacement.

## How does It work?

- During surgery, the end of the thigh bone (femoral head) is replaced with a metal stem and an artificial ball that is secured to the top of the stem.
- The hip socket (acetabulum) is fitted with a metal cup that is lined with a durable plastic (polyethylene).

## A Replaced Hip



## Mako Robotic-Arm Assisted Surgery

### Mako Total Hip Replacement

Mako Robotic-Arm Assisted total hip replacement is a procedure designed for patients who suffer from the non-inflammatory or inflammatory degenerative joint disease of the hip. It provides surgeons with a personalized surgical plan based on a 3D model of your hip. This helps the surgeon focus on the removal of diseased bone, helps preserving healthy bone, and assists in positioning the implant based on your anatomy.

# How Does

## Mako Technology Work?

### Have a Plan Personalized for You:

It all begins with a CT scan of your joint that is used to generate a 3D virtual model of your unique anatomy. This virtual model is loaded into the Mako System software and is used to create your personalized pre-operative plan.

### In the Operating Room:

During surgery, the surgeon guides the robotic-arm while preparing the hip socket and positioning the implant based on your personalized preoperative plan. The Mako System also allows your surgeon to make adjustments to your plan during surgery as needed. When the surgeon prepares the bone for the implant, the Mako System guides the surgeon within the pre-defined area and helps prevent the surgeon from moving outside the planned boundaries. This helps provide more accurate placement and alignment of your implant.

### After Surgery:

After surgery, your surgeon, nurses and physical therapists will set goals with you to get you back on the move. They will closely monitor your condition and progress. Your surgeon may review an x-ray of your new hip replacement with you.



**Disclaimer:** The information presented is for educational purposes only. Speak to/ consult with your doctor / physician / surgeon to decide if joint replacement surgery is right for you.