

Hip Replacement

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Hip Replacement

Introduction

The hip joint is perhaps the strongest weight-bearing joint of the body. Powered by large muscles, the hip joint is essential to many of the body's most basic movements.

Whenever you walk, sit, bend, squat, turn around, drive or perform many other seemingly simple motions, you are depending on the hip for support and mobility. When your hip is healthy, you may take it for granted, not even giving a second thought about the job it does for you. But once it starts to become stiff and painful, and you are forced to restrict certain activities, you may come to realize how much freedom of movement means to you.

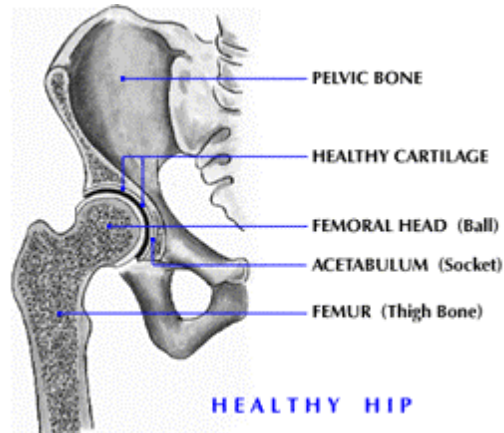
Fortunately, today's advanced medical technology makes it possible to replace the hip joint with an artificial joint that reduces pain, helps restore your joint's function and improves your quality of life. It is a procedure performed more than 200,000 times a year in the U.S., and one that offers a high rate of success.

The following information describes how your hip works, the conditions that may cause your pain and the hip replacement surgery you will have. We will also help you make preparations for the upcoming surgery and outline what you can expect every step of the way.

How Your Hip Joint Functions

The healthy hip. The healthy hip joint is a remarkable mechanism. It is composed of the rounded head of the femur (thigh bone) joining the acetabulum (socket) at the pelvis in a ball-and-socket arrangement. In a healthy joint, cartilage lines the ball of the femur and the acetabulum. This padding absorbs stress and assures that the ball glides easily within the socket, a movement that should be painless, effortless and smooth. Reinforcing its strength are tough bands of tissue called ligaments. The healthy hip joint is enclosed by a joint capsule which houses the synovial membrane. This membrane produces a lubricating fluid which contributes to the smooth movement of the hip.

The human hip is designed to withstand a lifetime of strenuous activity. However, sometimes arthritis or other conditions intrude, interfering with the hip's ability to cushion the body from stress. Eventually this chronic condition leads to the severe pain that dramatically erodes your quality of life.



Causes of Hip Damage

Inflammatory arthritis (swelling of the joint lining), a fracture, or rarely, osteonecrosis (death of the bone), may all lead to damaged hip joints. However, perhaps the most common cause of damaged hip joints is osteoarthritis.

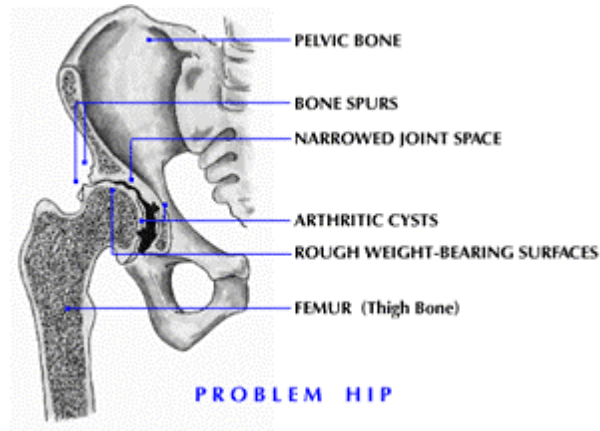
What is Osteoarthritis?

Osteoarthritis is not a symptom of "just getting old." It is a degenerative disease of the joints that is not part of the normal aging process. Indeed, some patients with osteoarthritis experience symptoms in their 20s and 30s. Athletes and dancers are especially at risk due to excessive strain on the joints.

Osteoarthritis causes permanent deterioration of the cartilage layers that shield the joint from impact. Because cartilage cannot repair or replenish itself, it begins to crack, wear away and eventually disappear. The cushion your hip needs to absorb stress is gone, resulting in bone-on-bone contact. The bones in advanced cases may be so rough and pitted from grinding against each other that they form bone spurs, which can cause severe pain and immobility.

In the first stages of osteoarthritis, you may begin to feel stiffness or achiness in the hip. Soon, you may begin to feel pain in your joint. One leg may feel shorter than the other when walking or standing. Sometimes, the discomfort of an arthritic hip will first present itself as a shooting pain through the groin, leg or knee that is severe enough to make you stop and catch your breath. Eventually, your mobility may become limited and you may need to alter your lifestyle to accommodate the arthritic hip. If you are overweight, the extra stress on your hip can accelerate the damage.





You may have already had to curb or quit everyday activities like shopping or walking, not to mention recreational ones such as golfing, bicycle riding and traveling. This is partly why osteoarthritis can make you feel old, even though you may still be in the prime of life. But there is hope -- you have options.

How to Know When You May Be Ready for Total Hip Replacement Surgery

Total hip replacement surgery is an elective procedure. Along with your doctor, you will decide when the time is right for this surgery. Your doctor has probably treated your condition with pain medications, anti-inflammatory drugs or perhaps even physical therapy or a walking assistance device such as a cane.

But the pain may become so severe that even staying off your feet doesn't help. You cannot sleep or turn over at night because of the discomfort. Perhaps as you favor one side, you will also begin to feel discomfort in the other hip as it works harder to carry the additional burden.

You are probably the best judge of if and when you will finally need total hip replacement surgery. When the pain becomes so chronic, so constant and so debilitating that even medication does not seem to help, you will know you are ready to consider surgery.

Getting Into Shape Mentally and Physically

After you and your doctor have decided that hip replacement surgery is appropriate for you, consider these **four essential steps** that will help you get into shape before hip replacement surgery:

- 1. Commit to the success of your surgery.** Working as a team, you, your physician and your family must adopt a positive attitude toward the success of your surgery. Together, you will gain a clear understanding of the common goals and expectations of the procedure.
- 2. Lose excess weight.** Because excess weight causes strain to be placed on already-damaged joints, losing weight is one of the best ways to improve the condition of your hip and optimize surgical results. Remember to seek your doctor's advice before beginning your weight loss program.
- 3. Start a physician-approved, low-impact exercise plan.** After a comprehensive assessment of your condition, your physician or physical therapist may recommend a low-impact exercise plan that will strengthen your hip without creating further damage. Do not attempt an exercise program without consulting your physician!
- 4. Stop smoking.** If you have not already done so, it is suggested that you stop smoking. This will be good for you during and after your surgery.

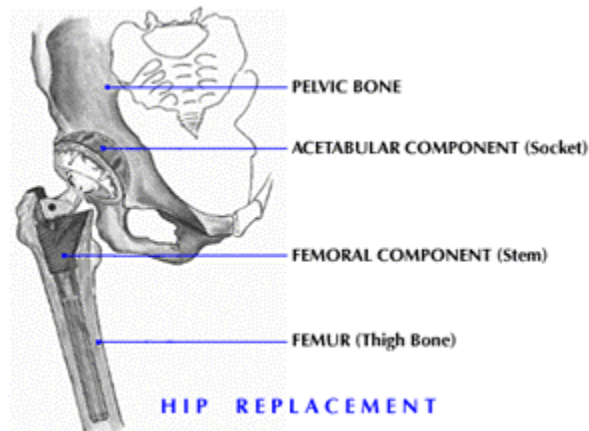
General Information

About Total Hip Replacement Surgery

Surgeons and manufacturers have made remarkable advances in joint replacement technology over the last few years. The materials are long-lasting (generally from 7 to 15 years), and the surgical methods have been fine-tuned and standardized. As a result, the chances for a successful outcome are very good.

The Components of Your New Joint

In total hip replacement (also known as total hip arthroplasty, or THA), all or part of the joint surfaces are resurfaced with man-made materials. The implant (prosthesis) type may vary according to your needs, but the most common implant consists of two component parts. The femoral part has a stem that extends into a canal in your thigh bone. Depending on your condition, the femoral component may be secured by bone cement. The acetabular component is placed inside your socket and consists of high-density polyethylene which may be backed with a metal cup. This component may be fixed with or without cement.

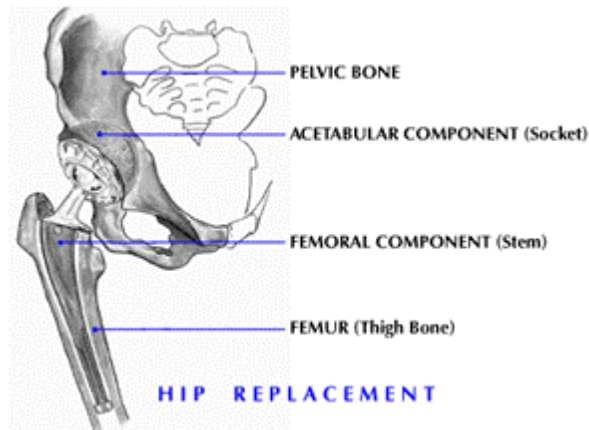


Benefits of Joint Replacement

Once your new joint has completely healed, you will reap the benefits of the surgery. These may include:

- Reduced joint pain
- Increased movement and mobility
- Correction of deformity
- Increased leg strength (if you exercise)
- Improved quality of life - ability to return to normal activities and pastimes

Most likely, running, jumping, jogging or other high-impact activities will be discouraged. But some patients can resume golf, dancing, walking, hiking, bicycling, cross-country skiing, bowling, swimming and other low-impact sports. Make sure to discuss these activities with your orthopaedic surgeon before participating in them.



Risks of Hip Joint Replacement Surgery

As with any major surgery, there are potential risks involved. It is important that you are informed of these risks before the surgery takes place.

Improper prosthesis selection or alignment, inadequate fixation, use where contraindicated or in patients where medical, physical, mental, or occupational conditions will likely result in extreme stresses to the implant, may result in premature failure due to loosening, fracture or wear. Infection and loosening have been reported following total joint arthroplasty, as have wear and failure due to fracture or breakage of prosthesis components.

Infection. Because a bacterial infection from your mouth could infect your new joint, you will be asked to complete all dental work before surgery. Consult your physician before scheduling any postoperative dental work. Postoperative infection has been reported as a complication in a small percentage of joint replacement cases. Consult your physician for more details.

Blood clots. You could develop blood clots. Many THA surgeons prescribe anti-coagulation medications after surgery. You may also need to wear elastic stockings for several weeks to minimize the risk of blood clots forming and to prevent emboli.

Pneumonia. Pneumonia can sometimes develop in patients who are lying in bed right after surgery. A device called an incentive spirometer helps clear your lungs. Your doctor may also encourage you to get out of bed soon after surgery.

Pre-Surgery

Making Preparations for Surgery

Medical Evaluations

Before surgery, your doctors need to understand your overall health status. You will be evaluated in several ways.

Complete medical evaluation. Your doctor will take your health history, an inventory of medications you now take, and will administer a total physical. X-ray images will be taken of your knee that help the surgeon plan your surgery. Some patients will also need chest x-rays, ECGs and other tests to ensure they are strong enough for surgery and recovery. You may also want to discuss surgery with your primary care physician.

Preliminary lab work. As part of your pre-admission process, you will need to undergo routine lab work. Your physician's nurse can explain what each test is and why you need it.

Donate your own blood. You may be asked to donate some blood to have on hand in case you need it during surgery. Some patients cannot donate their own blood. In these cases, using pre-screened blood bank blood is recommended.

Getting Your Home Ready

To make your life easier post-operatively, it pays to think ahead about how to adapt your home environment for safety and greater efficiency. Here are some tips that can help:

Arrange for help now. You won't be able to drive immediately after surgery. This means you will need the assistance of someone who can drive you to your follow-up doctor's appointments, as well as help you with shopping and errands. Try to line up this person's assistance now.

Stock up on essentials. Have individually packaged convenience food items ready, or make and freeze some casseroles that you can simply warm up later. Stock up on extra toilet paper, paper towels, toothpaste, etc., so you have plenty on hand.

Reorganize your home. Bending, kneeling and squatting will be impossible immediately following your surgery. Also remember, you will be on crutches or a walker for awhile. Place everyday essentials in top drawers or easy-access places. Remove loose scatter rugs, electrical cords and clutter that poses a hazard. Don't wax floors.

Obtain assistance items. It makes sense to have certain assistance items ready when you return home. Some suggested items might be a cordless phone, large apron with pockets, backpacks, reaching aids and bathing aids. Check with your surgeon and hospital to identify which items will be provided to you at discharge.

Packing for the Hospital

When packing your hospital bag, bring your list of medications, your insurance card and/or Medicare card and the telephone numbers of your relatives or designated "help" person. Bring walking shoes, loose, comfortable clothes, underwear, books or personal stereo with headphones, personal care items and cash for sundries. Please don't bring jewelry, large amounts of cash, credit cards or other valuable items to the hospital with you.

A Note About Medications

It is very important to tell your doctor about every single medication you are taking, even aspirin or ibuprofen. Some medications are not compatible with anesthetic, and others could increase bleeding or cause other problems. Your physician will determine which medications you can continue up until your surgery, and which ones you must discontinue.

Surgery

What to Expect the Day of Surgery

Most likely, you will be admitted to the hospital the morning of your surgery. You will change into a hospital gown. Your vital signs will be taken by a nurse. An intravenous line containing medications and fluids will be inserted comfortably into a vein on your arm or neck. At this point, your anesthesiologist will arrive to begin administration of your anesthetic for surgery. You may have general anesthesia or spinal anesthesia with sedation. Once you are transferred to the operating room, you are moved to the operating table where the surgery will take place. This is often the last thing you remember before waking up in the PACU (Post-Anesthesia Care Unit, or recovery room).

What Happens During Surgery

During most hip replacement surgeries, the orthopedic surgical team will make an incision on the outside of your hip. The damaged ball is removed and the surface of the old socket smoothed and fitted with an acetabular implant. The stem of the prosthesis is then secured into the femur. The incision is closed with staples or stitches.

What to Expect Right After Surgery

In the PACU, you will recover from surgery until you are awake and alert. You could experience chills or nausea -- these are normal side effects of anesthesia. You may notice:

Drainage tubes and catheters. A drainage tube and catheter may be in place.

Pain medications. To manage the pain you may feel right after surgery, you will be given medication. Some patients are treated with a PCA (patient-controlled analgesia), a device which you use to administer your own pain medication through an IV. After the IV is removed, you will receive the pain medication in pill form.

Elastic stockings and pillows. You are fitted with elastic surgical stockings that help prevent blood clots and improve circulation. You may wear these stockings every day for six to eight weeks following surgery. A pillow or wedge is placed between your legs to maintain proper body alignment while healing occurs.

CPM machine. Your operated leg may be connected to a CPM (continuous passive motion) machine, which slowly bends it up and down to improve range of motion.

You are returned to your regular hospital room once you are completely awake. Your family members may then visit you in your room.

Post-Surgery

One to Two Days After Surgery

IV tubes and other lines are usually removed the first few days following surgery. Your dressing will be changed and your wound drain will probably be removed. Your blood will be tested daily for coagulation.

The start of physical therapy. Physical therapy usually begins for most patients within the first few days following surgery. These hip and leg exercises will help you build strength and mobility. Ideally you will be able to get out of your bed and over to a chair (called a transfer) with the help of a nurse two or three times on the first day.

Walking. Believe it or not, it may be possible for you to walk within hours of surgery. You may be encouraged to do so, as walking generally helps prevent blood clots and speeds your recovery. With the help of the therapist and nurses, you should be able to transfer at least three times a day. You will eventually be able to transfer with your crutches or walker.

Education. Nurses and physical therapists will teach you how to protect your new hip by showing you which movements to avoid. Occupational therapists will show you how to dress, wash and use stairs. Physical therapists will give you special exercises to do while you are in the hospital.

Three to Four Days After Surgery

Your physical therapy will continue, except you will practice becoming even more independent in your exercises, transfers from bed to chair, and other activities your therapist has designed for you. Before you are discharged from the hospital, your physician and physical therapist will review instructions for your continuing care and exercises at home. You will be given prescriptions for medication you need.

Precautions After Hip Replacement Surgery:

The First Eight Weeks

- Do not bend the hip beyond a 90-degree angle - avoid low chairs and low toilet seats that could cause this to happen.
- Do not pivot or twist on the operated leg.
- Do not sit for long periods of time.
- Do not cross your legs at the knees or ankles.
- Do not bend over to pick up anything from the floor or a low cupboard. Use your reacher for this or ask a companion for assistance.
- Do not sleep on your side until instructed by your physician.

- Do not use a whirlpool or jacuzzi, swimming pool or ride an exercise bike during the first six weeks.
- Use your walker or crutches always. Do not hold onto the wall or furniture for support. It is too easy to lose your footing and fall.
- If prescribed, do wear your elastic stockings every day. They may seem like a nuisance, but remember they are a vital part of your healing process.
- Walk. It is your most vital physical therapy. Start out small and keep increasing the distances as you become stronger.
- Call your physician if you notice any of the following symptoms:
 - Increased hip pain
 - Pain or swelling in a calf or leg
 - Unusual redness, heat or drainage at the incision site
 - Trouble breathing; shortness of breath
 - Fever over 101? F

Long-term Care of Your New Hip

You can protect your new hip by taking a few simple steps:

Watch for and prevent infection. Because your new hip is so sensitive to infections, you must be diligent about preventing them. You may need to take antibiotics before seeing the dentist. If you suspect a bacterial infection of any kind, notify your physician immediately. If you need dental work, contact your physician first for a course of antibiotics before the procedure is done.

Follow-up care. When you leave the hospital, you will be given a schedule of follow-up visits. These visits will ensure the long-term success of your operation. Your physician may want to check you several times during the first year and annually after that. Often, follow-up x-rays are used to confirm proper placement of the prosthesis.

Weight control. Keeping your weight under control will reduce the amount of pressure and stress on your new hip. Avoid high-impact sports and, with your doctor's permission, participate regularly in low-impact activities such as walking, swimming, golfing or cycling. These are excellent ways to strengthen your new hip and get the exercise you need to stay fit.

Glossary

ACETABULAR - Pertaining to the hip socket.

ACETABULUM - The hip socket.

ARTHROPLASTY - The surgical replacement of your hip joint with an artificial one.

CARTILAGE - A layer of soft tissue that helps joints absorb stress.

EMBOLI (Pulmonary Embolism) - The plugging of pulmonary arteries with fragments of a blood clot after surgery.

INCENTIVE SPIROMETER - A tube you blow into to keep your lungs clear after surgery.

IV LINE - A tiny catheter inserted into your arm or neck to administer fluids or medications during, and one or two days after, surgery.

HOME HEALTH CARE - Professional care such as nursing or living assistance that takes place in the home.

OSTEOARTHRITIS - Degenerative disease of the joints in which the cartilage begins to wear away.

PACU - Post anesthesia care unit (recovery room).

PCA (Patient controlled analgesia) - A device attached to the IV line which allows patients to administer their own pain medication following surgery.

PROSTHESIS - The artificial joint; also referred to as the implant.

TRANSFER - A physical therapy term for getting up from your bed and moving yourself to a chair, or vice versa.