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# Hip Replacement Surgery

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## Hip Replacement Surgery

### Surgery Overview

Total joint replacement involves surgery to replace the ends of both bones in a damaged joint to create new joint surfaces.

Total hip replacement surgery uses metal, ceramic, or plastic parts to replace the ball at the upper end of the thighbone (femur) and resurface the hip socket in the pelvic bone.

Total hip replacement surgery replaces damaged cartilage (See figure in appendix) with new joint material in a step-by-step process (See figure in appendix) .

Doctors may attach replacement joints to the bones with or without cement.

- Cemented joints are attached to the existing bone with cement, which acts as a glue and attaches the artificial joint to the bone.
- Uncemented joints are attached using a porous coating that is designed to allow the bone to adhere to the artificial joint. Over time, new bone grows and fills up the openings in the porous coating, attaching the joint to the bone.

Doctors often use general anesthesia for joint replacement surgeries, which means you'll be unconscious during surgery. But sometimes they use regional anesthesia, which means you can't feel the area of the surgery and you are sleepy, but you are awake. The choice depends on your doctor, on your overall health, and, to some degree, on what you prefer.

Your doctor may recommend that you take antibiotics before and after the surgery to reduce the risk of infection. If you need any major dental work, your doctor may recommend that you have it done before the surgery. Infections can spread from other parts of the body, such as the mouth, to the artificial joint and cause a serious problem.

### **Minimally invasive surgery**

Some doctors are doing hip replacement surgery through smaller incisions. This is called minimally invasive surgery. It may mean less blood loss and a smaller scar. But it can also mean a longer time in surgery, because the surgery is harder to do. And if the new hip cannot be fitted properly through the smaller incision, the doctor may have to make a larger opening anyway. These surgeries can also require special equipment that not all hospitals have. Minimally invasive surgery is not done often for hip replacement. If you are interested in this type of surgery, talk to your doctor. Whether the procedure is a good idea for you depends on your doctor's opinion and also on his or her training and practice.

## **What To Expect After Surgery**

### **Right after surgery**

You will have intravenous (IV) antibiotics for about a day after surgery. You will also receive medicines to control pain and perhaps medicines to prevent blood clots. It is not unusual to have an upset stomach or feel constipated after surgery. Talk with your doctor or nurse if you feel ill.

When you wake up from surgery, you may have a catheter, which is a small tube connected to your bladder, so you don't have to get out of bed to urinate. You may also have a compression pump or compression stocking on your leg, which squeezes your leg to keep the blood circulating and to help prevent blood clots. And you may have a cushion between your legs to keep your new hip in the correct position.

Your doctor may teach you to do simple breathing exercises to help prevent congestion in your lungs while your activity level is reduced. You may also learn to move your feet up and down to flex your muscles and keep your blood circulating. And you may begin to learn about how to keep your hip in the correct positions while you move in bed and get out of bed.

### **The first few days**

You will probably still be taking some medicine. You will gradually take less and less pain medicine. You may continue medicines to prevent blood clots for at least ten days after surgery.

Rehabilitation (rehab) after hip replacement surgery may vary depending on whether the surgeon used cement or cementless methods to attach the joint replacement surfaces. Whether your surgeon used cement also determines how much weight you

can put on your leg. Your surgeon will let you and your rehab team know what limitations you have. You'll probably need a walker, a cane, or crutches for several weeks.

In general, most people get out of bed with help on the day of surgery or the next day. Over the next few days, you will learn how to walk with a walker or crutches. Your physical therapist and sometimes an occupational therapist will teach you how to exercise, walk, and do activities such as dressing and cooking while you allow your hip to heal. Depending on the type of surgery you had and your doctor's instructions, you may learn the following precautions to keep your hip from dislocating:

- Avoid combinations of movement with your new hip. For example, do not sit with your legs crossed, because in that position you both bend your hip and bring your hip across your body.
- Your doctor may not want your hip to bend more than 90 degrees. If so, your therapist may suggest these ideas:
  - Do not sit on low chairs, beds, or toilets. You may want to get a special raiser for your toilet seat temporarily.
  - Do not raise your knee higher than your hip.
  - Do not lean forward while you are sitting down, or as you sit down or stand up.
  - Do not bend over more than 90 degrees. This means you can't bend down to tie your shoes for a while.
- For about 8 weeks, your doctor may not want your leg to cross the center of your body toward the other leg. If so, your therapist may suggest these ideas:
  - Do not cross your legs.
  - Be careful as you get in or out of bed or a car, so your leg does not cross that imaginary line in the middle of your body.
- Your doctor may not want your leg to rotate in or too far out. If so, your therapist may suggest that you keep your toes pointing forward or slightly out.

Most people go home within a few days to a week after surgery. Some people who need more extensive rehab or those who don't have someone who can help at home go to a specialized rehab center for more treatment.

## **Continued recovery**

After you go home, monitor the surgery site and your general health. If you notice any redness or drainage from your wound, notify your surgeon. You may also be advised to take your temperature twice each day and to let your surgeon know if you have a fever over 100.5°F (38.1°C).

For a while, you may need to sit only in high chairs (not on low seats that flex your hip more than 90 degrees), use a toilet seat raiser, and sleep on your back.

You may need to use a walker or crutches for several weeks after surgery until you can bear your full weight, have less pain, and can safely move around without falling. How long you need to use crutches or a walker depends on the condition of your bones and what type of procedure your doctor used as well as his or her experience working with

other people who had similar surgery.

Physical therapy typically continues after you go home from the hospital until you are able to function more independently. Total rehabilitation after surgery will take at least 6 months.

You will have an exercise program to follow when you go home, even if you are still having physical therapy. You should also take a short walk several times each day. If you notice any soreness, try a cold pack on your hip and perhaps decrease your activity a bit, but don't stop completely. Staying with your walking and exercise program will help speed your recovery.

For most people it is safe to have sex about 4 to 6 weeks after a hip replacement. Talk to your doctor about how and when it is safe. And ask your physical therapist or occupational therapist about positions that will not put your new hip joint at risk.

### **Living with a hip replacement**

Your doctor will probably want to see you at least once every year to monitor your hip replacement. Gradually, you will return to most of your presurgery activities. If you drive a car, your doctor will probably allow you to start driving an automatic shift car in 6 to 8 weeks, as long as the seat is not too low and you are no longer taking pain medicine.

Because of the way the hip is structured, every added pound of body weight adds 3 pounds of stress to the hip. Controlling your weight will help your new hip joint last longer.

Stay active to help keep your strength, flexibility, and endurance. Your activities might include walking, swimming (after your wound is completely healed), dancing, golf (don't wear shoes with spikes, and do use a golf cart), and bicycling on a stationary bike or on level surfaces. More strenuous activities, such as jogging or tennis, are not advised after a hip replacement.

Your doctor may want you to take antibiotics before dental work or any invasive medical procedure for at least 2 years after your surgery. This is to help prevent infection around your hip replacement. After 2 years, your doctor and dentist will decide whether you still need to take antibiotics. Your general health and the state of your other health conditions will help them decide.

## **Why It Is Done**

Doctors recommend joint replacement surgery when hip pain and loss of function become severe and when medicines and other treatments no longer relieve pain. Your doctor will use X-rays to look at the bones and cartilage in your hip to see whether they are damaged and to make sure that the pain isn't coming from somewhere else.

Total hip replacement may not be recommended for people who:

- Have poor general health and may not tolerate anesthetic and surgery well.

- Have an active infection or are at high risk for infection.
- Have osteoporosis (significant thinning of the bones).
- Are involved in heavy manual labor or physically demanding sports.
- Are severely overweight (replacement joints may be more likely to fail in people who are very overweight).

But doctors evaluate each person individually.

## How Well It Works

People who have hip replacement surgery have much less pain than before the surgery and are usually able to resume daily activities. You will probably be able to do your daily activities more easily because the joint moves better.

- It probably will be easier for you to do things such as climb stairs, get in and out of a car, walk without tiring, walk without a limp or with less of a limp, and take care of your feet.
- You probably will be able to resume activities, such as golfing, biking, swimming, or dancing, that you did before surgery.
- Your doctor may discourage you from running, playing tennis, and doing other things that put a lot of stress on the joint.

Most artificial hip joints will last for 10 to 20 years or longer without loosening, depending on such factors as:

- Your lifestyle and how much stress you put on a joint.
- How much you weigh (being very overweight puts extra stress on the joint).
- How well your new joint and bones mend.

The younger you are when you have the surgery and the more stress you put on the joint, the more likely it is that you will eventually need a second surgery to replace the first artificial joint. Over time, the components wear down or may loosen and need to be replaced.

Your artificial joint should last longer if you are not overweight and if you do not do hard physical work or play sports that stress the joint. If you are older than 60 when you have joint replacement surgery, the artificial joint probably will last the rest of your life.

Doctors continue to discover new ways to improve the life span of artificial hip joints. What we know today about the long-term outcomes of hip replacement surgery comes from studies of joints that were replaced 10 to 20 years ago or longer. People who have hip replacement surgery today may expect the artificial joint to last longer than joints replaced 10 to 20 years ago.

## Risks

The risks of hip replacement surgery can be divided into two groups:

- Risks of the surgery and recovery period

- Long-term risks that may occur months to years after the surgery

The risks of each complication depend in part on your other health problems and on the surgeon.

## Risks of the surgery and recovery period

- **Blood clots.** People may develop a blood clot in a leg vein after hip joint replacement surgery. Blood clots can be dangerous if they block blood flow from the leg back to the heart or if they move to the lungs. Blood clots are more common in older people, those who are very overweight, those who have had blood clots before, or those who have cancer.
- **Infection in the surgical wound or in the joint.** Infection is rare in people who are otherwise healthy. People who have other health problems, such as diabetes, rheumatoid arthritis, or chronic liver disease, or those who are taking corticosteroids are at higher risk of infection after any surgery. Infections in the wound usually are treated with antibiotics. Infections deep in the joint may require more surgery, and in some cases the doctor must remove the artificial joint. If the joint pieces have to be removed, they are usually replaced. But that surgical procedure (revision) is more complicated than the original hip replacement and has a greater risk of problems.
- **Nerve injury.** In rare cases, a nerve may be injured around the site of the surgery. This is more common (but still unusual) if the surgeon is also correcting deformities in the joint. A nerve injury may cause tingling, numbness, or difficulty moving a muscle. These injuries usually get better over time and in some cases may go away completely.
- **Problems with wound healing.** Wound healing problems are more common in people who take corticosteroids or who have diseases that affect the immune system, such as rheumatoid arthritis and diabetes.
- **Deposits of bone in soft tissues around the hip joint.** This is called heterotopic ossification. It usually doesn't affect how well the hip works, but it may decrease the range of motion at the hip. The condition needs treatment (surgery) only if it causes pain or greatly limits motion.
- **Hip dislocation after surgery.** It is rare to have a hip dislocation after hip replacement surgery. Your doctor can usually treat this by moving the hip back into place after giving you pain medicine or anesthetic. You also may wear a brace for a while. In a few cases, surgery may be needed to put the joint back in place.
- **Difference in leg length.** Usually, any difference in leg length is very small and does not cause any pain or functional problem. If you have a noticeable difference, it can often be corrected by using a shoe insert.
- **The usual risks of general anesthesia.** Risks of any surgery are higher in people who have had a recent heart attack and those who have long-term (chronic) lung, liver, kidney, or heart disease.

## Long-term risks

- **Loosening of the artificial hip joint parts.** Over time, loosening is the most common problem associated with total hip replacement. Tissue may grow between the components and the bone, leading to loosening. Loosening usually doesn't cause any symptoms and is visible only on X-rays. If a loosened joint causes severe pain, you may need a second joint replacement.
- **Infection.** People who have any sort of artificial material in their bodies, including artificial joint components, have a higher risk of infections around the artificial material. They may need to take antibiotics before and after procedures such as surgery, tests that involve inserting instruments into the body, and dental work to help reduce the risk of infection.
- After a hip replacement, tiny bits of the surface of the new hip joint wear off as the ball and socket pieces rub against each other. Some people are sensitive to the types of metal that can be used for joint replacements. Tell your doctor about any symptoms related to your hip, groin, or leg that are new or getting worse. And be sure all your health providers know you have a hip replacement.

## What To Think About

Continued exercise (such as swimming and walking) is important for your general well-being and muscle strength. Discuss with your doctor what type of exercise is best for you.

You may donate your own blood to use during surgery if needed. This is called autologous blood donation. If you choose to do this, start the donation several weeks before the surgery so that you have time to donate enough blood and rebuild your blood volume before surgery.

If you need more than one joint replacement surgery, such as a knee and a hip, talk to your doctor about guidelines that may help you and your doctor decide in which order to do the surgeries.



Arthritis: Should I Have Hip Replacement Surgery?

**Complete the surgery information form (PDF) to help you prepare for this surgery.**

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## Credits for Hip Replacement Surgery

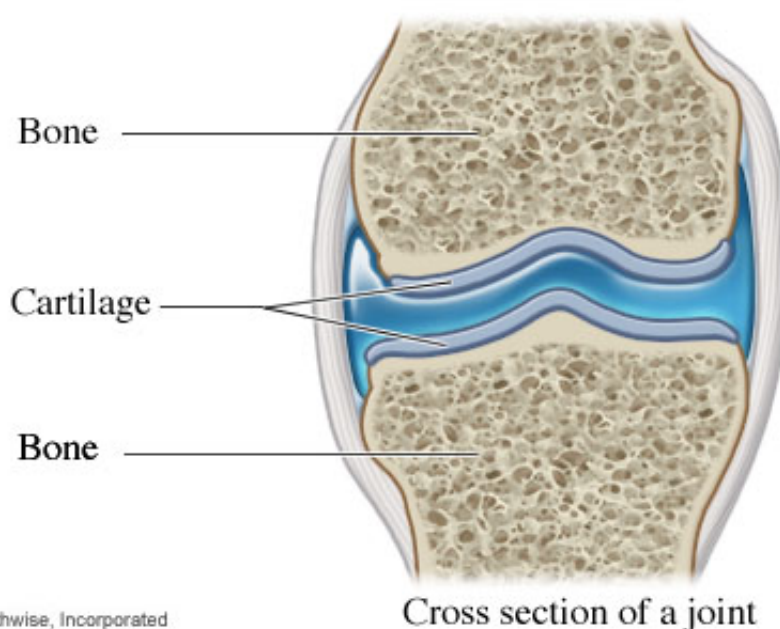
**By** Healthwise Staff  
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**Last Revised** November 5, 2013

## Appendix

## Topic Images

Figure

### Cartilage



Cartilage is a type of hard, thick, slippery tissue that coats the ends of bones where

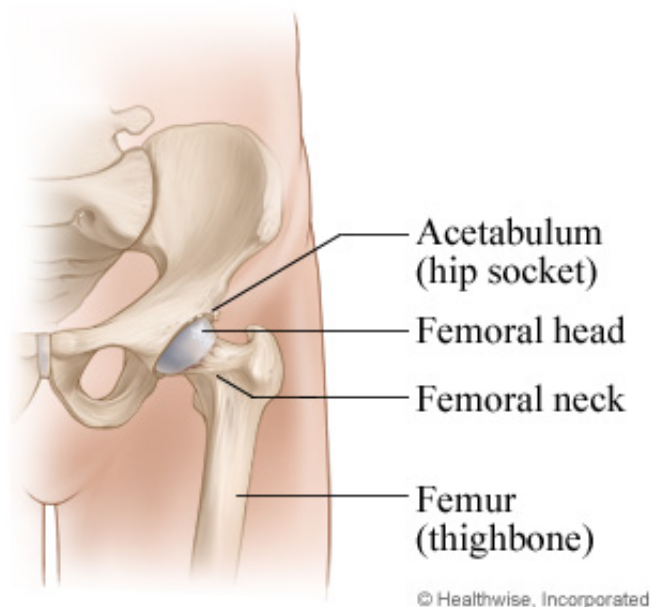


they meet with other bones to form a joint. Cartilage lines the joint space between bones throughout the body, including the spine and the rib cage. It acts as a protective cushion between bones to absorb the stress applied to joints during movement.

Cartilage is made up of protein strands called collagen that form a tough, meshlike framework. The mesh is filled with substances that hold water, much like a sponge. When weight is placed on cartilage, water is squeezed out of the mesh. When weight is taken off, the water returns. Cartilage does not contain blood vessels or nerves.

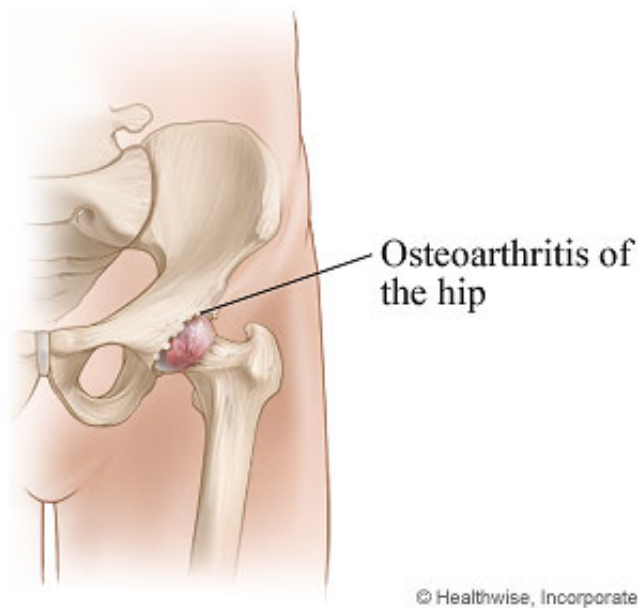
**Figure 2**

## Normal hip joint



**Figure 3**

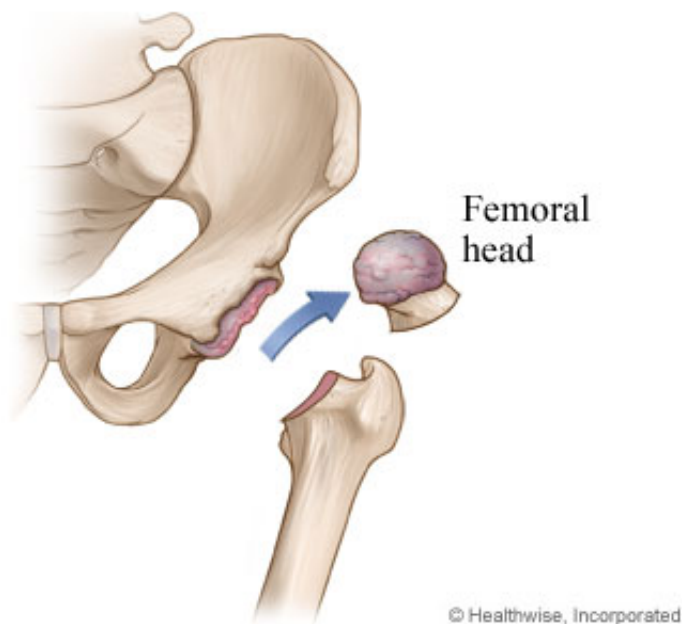
## Osteoarthritis of the hip



In osteoarthritis, the cartilage that protects and cushions the joints breaks down over time. As the cartilage wears down, the bone surfaces rub against each other. This damages the tissue and bone, which then causes pain. The joint space in this hip joint is narrowed due to cartilage loss and bone spur formation.

**Figure 4**

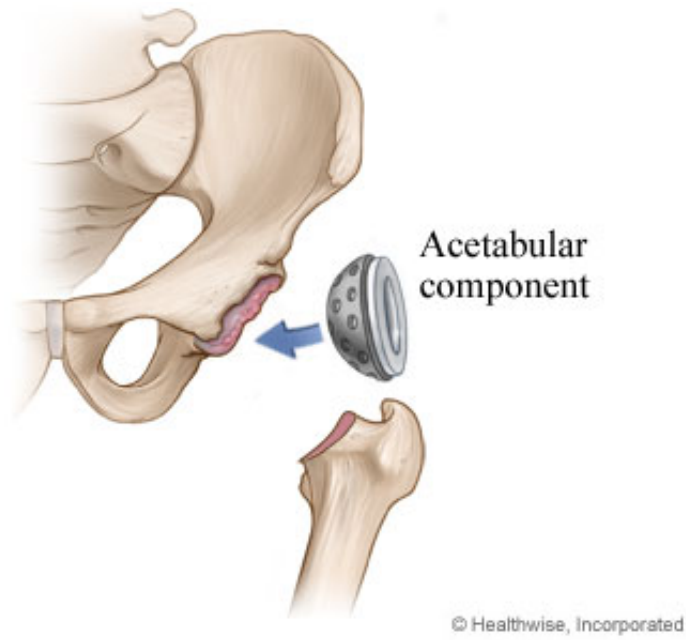
### **Damaged cartilage and bone are removed from hip socket and femur**



Removal of cartilage from the hip socket (acetabulum) and removal of the upper end of the femur

**Figure 5**

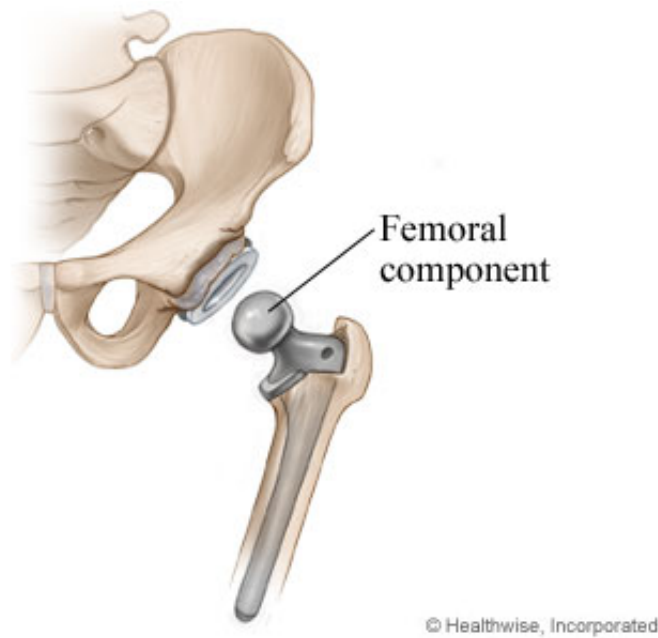
**Hip socket component is placed**



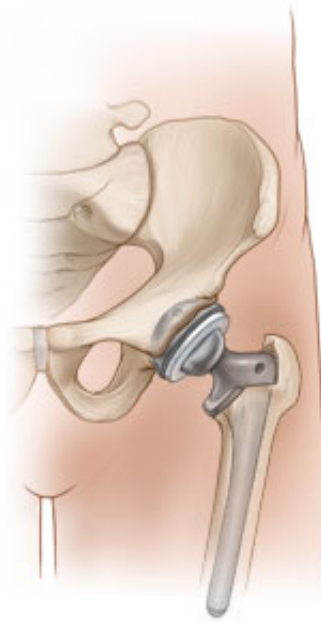
Placement of acetabular component

**Figure 6**

**Femoral component is placed**



Placement of femoral component

**Figure 7****Hip replacement is complete**

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Completed hip replacement

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