



TOTAL HIP REPLACEMENT

Patient Information

If your hip has been damaged by arthritis, a fracture or other conditions, common activities such as walking or getting in and out of a chair may be painful and difficult. Your hip may be stiff and it may be hard to put on your shoes and socks. You may even feel uncomfortable while resting.

Like other joints that carry your weight, your hips may be at risk for "wear and tear" arthritis (osteoarthritis), the most common form of hip arthritis. The smooth and glistening covering (articular cartilage) on the ends of your bones that helps your hip joint glide may wear thin. The first sign may be a bit of discomfort and stiffness in your groin, buttock or thigh when you wake up in the morning. The pain flares when you're active and gets better when you rest.

If you don't get treatment for osteoarthritis of the hip, the condition keeps getting worse until resting no longer relieves your pain. The hip joint gets stiff and inflamed. Bone spurs might build up at the edges of the joint. When the cartilage wears away completely, bones rub directly against each other. This makes it very painful for you to move. You may lose the ability to rotate, flex or extend your hip. If you become less active to avoid the pain the muscles controlling your joint get weak, and you may start to limp.

You are more likely to get osteoarthritis if you have a family history of the disease. You're also at risk if you are elderly, overweight or have an injury that puts stress on your hip cartilage. You can also get osteoarthritis without any of these risk factors.

If medications, changes in your everyday activities, and the use of walking aids such as a cane are not helpful, you may want to consider hip replacement surgery. By replacing your diseased hip joint with an artificial joint, hip replacement surgery can relieve your pain, increase motion, and help you get back to enjoying normal, everyday activities.

First performed in 1960, hip replacement surgery is one of the most important surgical advances of the last century. Since then, improvements in joint replacement surgical techniques and technology have greatly increased the effectiveness of this surgery. Today, more than 30,000 hip replacements are performed each year in Australia. Similar surgical procedures are performed on other joints, including the knee, shoulder, and elbow.

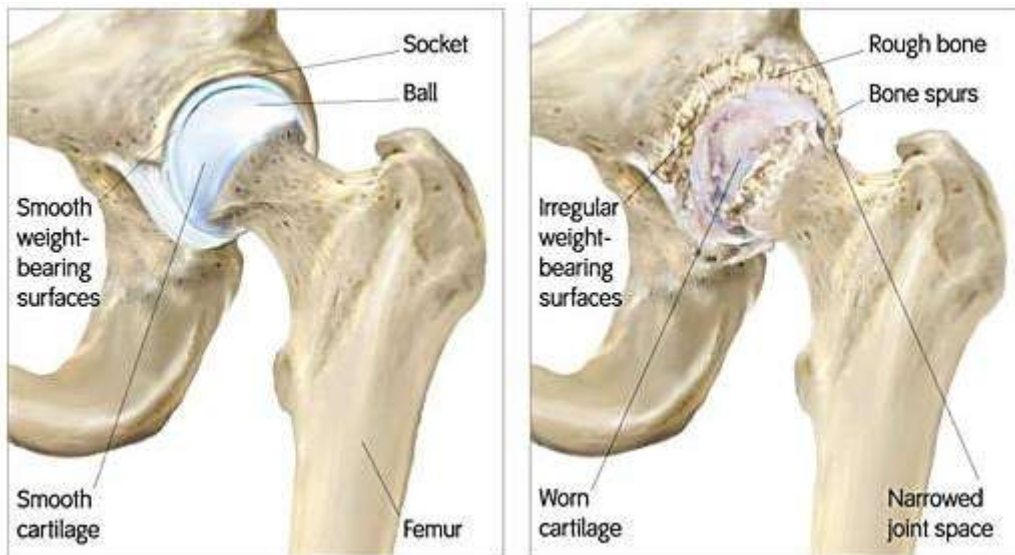
How the normal hip works

The hip is one of your body's largest weight-bearing joints. It consists of two main parts: a ball (*femoral head*) at the top of your thighbone (*femur*) that fits into a rounded socket (*acetabulum*) in your pelvis. Bands of tissue called ligaments (*hip capsule*) connect the ball to the socket and provide stability to the joint.

The bone surfaces of your ball and socket have a smooth durable cover of *articular cartilage* that cushions the ends of the bones and enables them to move easily.

A thin, smooth tissue called *synovial membrane* covers all remaining surfaces of the hip joint. In a healthy hip, this membrane makes a small amount of fluid that lubricates and almost eliminates friction in your hip joint.

Normally, all of these parts of your hip work in harmony, allowing you to move easily and without pain.



Common causes of hip pain and loss of hip mobility

The most common cause of chronic hip pain and disability is arthritis. *Osteoarthritis*, *rheumatoid arthritis*, and *traumatic arthritis* are the most common forms of this disease.

Osteoarthritis usually occurs after age 50 and often in an individual with a family history of arthritis. It may be caused or accelerated by subtle irregularities in how the hip developed. In this form of the disease, the articular cartilage cushioning the bones of the hip wears away. The bones then rub against each other, causing hip pain and stiffness.

Rheumatoid Arthritis is an autoimmune disease in which the synovial membrane becomes inflamed, produces too much synovial fluid, and damages the articular cartilage, leading to pain and stiffness.

Traumatic Arthritis can follow a serious hip injury or fracture. A hip fracture can cause a condition known as avascular necrosis. The articular cartilage becomes damaged and, over time, causes hip pain and stiffness.

Is hip replacement surgery for you?

You may benefit from hip replacement surgery if:

- Hip pain limits your everyday activities such as walking or bending.
- Hip pain continues while resting, either day or night.
- Stiffness in a hip limits your ability to move or lift your leg.
- You have little pain relief from anti-inflammatory drugs or simple analgesics such as panadol.
- You have harmful or unpleasant side effects from your hip medications.
- Other treatments such as physical therapy or the use of a gait aid such as a cane don't relieve hip pain.

What to expect from hip replacement surgery

An important factor in deciding whether to have hip replacement surgery is understanding what the procedure can and can't do.

Most people who undergo hip replacement surgery experience a dramatic reduction of hip pain and a significant improvement in their ability to perform the common activities of daily living. However, hip replacement surgery will not enable you to do more than you could before your hip problem developed.

Following surgery, you will be advised to avoid certain activities, including jogging and high-impact sports, for the rest of your life.

Even with normal use and activities, an artificial joint (prosthesis) develops some wear over time. If you participate in high-impact activities or are overweight, this wear may accelerate and cause the prosthesis to loosen and become painful.

Preparing for surgery

Medical Evaluation. If you decide to have hip replacement surgery, you will be assessed at a preadmission clinic. You may be asked to have a complete physical by physician, to assess your health and ensure you have no conditions that could interfere with your surgery or recovery.

Tests. Several tests such as blood samples, a cardiogram, chest X-rays and urine samples may be needed to help plan your surgery and will be performed at the preadmission clinic visit.

Preparing Your Skin. Your skin should be free of any infections or irritations before surgery. If either is present, contact the rooms or the preadmission clinic for a program to improve your skin before your surgery.

Blood Donations. With current techniques, the need for post operative blood transfusions is decreased, and routine blood donation is not recommended.

Medications. You may need to stop some medications prior to surgery. You will be advised accordingly at your preadmission visit. Please ensure that you tell the staff at the preadmission clinic which medications that you take.

Dental Evaluation. Although infections after hip replacement are not common, an infection can occur if bacteria enter your bloodstream. Because bacteria can enter the bloodstream during dental procedures, you should consider getting treatment for significant dental diseases (including tooth extractions and periodontal work) before your hip replacement surgery. Routine cleaning of your teeth should be delayed for several weeks after surgery. After surgery it is important to tell your dentist that you have had a hip replacement.

Urinary Evaluation. Individuals with a history of recent or frequent urinary infections and older men with prostate disease should consider a urological evaluation before surgery. Please discuss this at either the preadmission clinic or with your local doctor.

Social Planning. Although you will be able to walk with crutches or a walker soon after surgery, you will need some help for several weeks with tasks such as cooking, shopping, bathing and laundry. If you live alone, a social worker, or a discharge planner at the hospital can help you make advance arrangements to have someone assist you at your home. Please discuss this at the preadmission clinic if you feel you will need some assistance.

Home planning

Here are some items and home modifications that will make your return home easier during your recovery.

- Securely fastened safety bars or handrails in your shower or bath
- Secure handrails along all stairways
- A stable chair for your early recovery with a firm seat cushion that allows your knees to remain lower than your hips, a firm back and two arms
- A raised toilet seat
- A stable shower bench or chair for bathing
- A long-handled sponge and shower hose

- A dressing stick, a sock aid and a long-handled shoe horn for putting on and taking off shoes and socks without excessively bending your new hip
- A reacher that will allow you to grab objects without excessive bending of your hips
- Firm pillows to sit on that keep your knees lower than your hips for your chairs, sofas and car
- Removal of all loose carpets and electrical cords from the areas where you walk in your home

Your surgery

You will most likely be admitted to the hospital on the day of your surgery. On your admission you will be assessed by an anesthetist. The most common types of anesthesia for hip replacement surgery are *general anesthesia* (which puts you to sleep throughout the procedure and uses a machine to help you breathe) or *spinal anesthesia* (which allows you to breathe on your own but anesthetizes your body from the waist down). The anesthetist will discuss these choices with you and help you decide which type of anesthesia is best for you.

Surgical procedure

The surgical procedure takes a few hours. The damaged cartilage and bone will be removed. The new metal and plastic joint surfaces to restore the alignment and function of your hip will then be inserted.

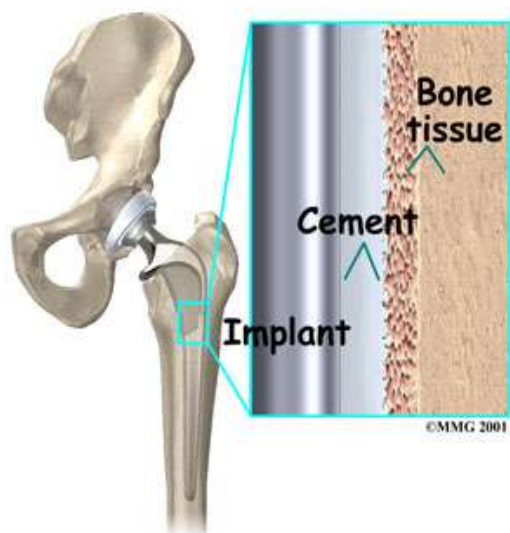
Many different types of designs and materials are currently used in artificial hip joints. All of them consist of two basic components: the *ball component* (made of a highly polished strong metal or ceramic material) and the *socket component* (a durable cup of plastic, ceramic or metal which may have an outer metal shell).

Special surgical cement may be used to fill the gap between the prosthesis and remaining natural bone to secure the artificial joint. A combination of a cemented ball and a noncemented socket may be used.

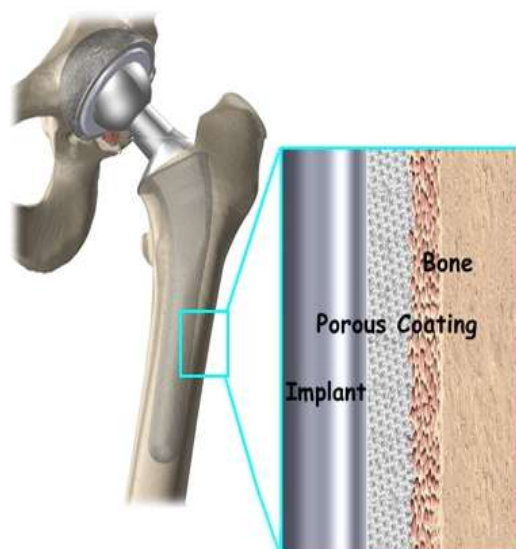
In patients with strong bone (usually younger, active patients), totally noncemented prosthesis may be used. The prosthesis may be coated with textured metal or a special bone-like substance, which allows bone to grow into the prosthesis.

After surgery, you will be moved to the recovery room where you will remain for one to two hours while your recovery from anesthesia is monitored. Once you are awake, you will be taken to your hospital room.

Cemented Hip Replacement



Noncemented Hip Replacement



A special note about minimally invasive total hip replacement

Over the past several years a new technique, known as minimally invasive hip replacement surgery, for inserting total hip replacements through smaller incisions has been developed and refined. In this practice the surgery is performed through an incision that allows the safe and predictable insertion of the components, with a minimal amount of soft

tissue injury. This incision is much smaller than the traditional incision. The incision size varies with factors including patient size and the underlying extent of the arthritic deformity. This technique combined with modern pain relief techniques have resulted in much better post operative pain control.

Your stay in the hospital

You will usually stay in the hospital for a few days. After surgery, you will feel pain in your hip. Pain medication will be given to make you as comfortable as possible.

To avoid lung congestion after surgery, you will be asked to breathe deeply and cough frequently. The nursing staff and physiotherapist will help remind you.

Walking and light activity are important to your recovery and will begin the day of or the day after your surgery. Most patients begin standing and walking with the help of a walking support and a physiotherapist the day after surgery. The physio will teach you specific exercises to strengthen your hip and restore movement for walking and other normal daily activities.

Possible complications after surgery

The complication rate following hip replacement surgery is low. Serious complications, such as joint infection, occur in less than 2 percent of patients. Major medical complications, such as heart attack or stroke, occur even less frequently. However, chronic illnesses may increase the potential for complications. Although uncommon, when these complications occur they can prolong or limit your full recovery.

Blood Clots

Blood clots in the leg veins are the most common complication of hip replacement surgery. A prevention program, which may include periodic elevation of your legs, lower leg exercises to increase circulation, support stockings and medication to thin your blood will be part of your treatment.

Warning signs of possible blood clots in your leg include:

- Increasing pain in your calf
- Tenderness or redness above or below your knee
- Increasing swelling in your calf, ankle and foot

Warning signs that a blood clot has traveled to your lung include:

- Sudden increased shortness of breath
- Sudden onset of chest pain
- Localized chest pain with coughing

Notify your doctor immediately if you develop any of these signs.

Preventing Infection

The most common causes of infection following total hip replacement surgery are from bacteria that enter the bloodstream during dental procedures, urinary tract infections, or skin infections. These bacteria can lodge around your hip replacement and cause an infection.

For the first two years after your hip replacement, you must take preventive antibiotics before dental or surgical procedures that could allow bacteria to enter your bloodstream. After two years, talk to your dentist or urologist to see if you still need preventive antibiotics before any scheduled procedures.

Warning signs of a possible hip replacement infection are:

- Persistent fever (higher than 38 degrees orally)
- Shaking chills
- Increasing redness, tenderness or swelling of the hip wound
- Drainage from the hip wound
- Increasing hip pain with both activity and rest

Notify your doctor immediately if you develop any of these signs.

Leg Length Inequality

Leg-length inequality may occur or may become or seem worse after hip replacement. With newer techniques this is less common, and the initial apparent inequality often improves over the first few months.

Other Complications

Other complications such as dislocation, nerve and blood vessel injury, bleeding, fracture and stiffness can occur. In a small number of patients, some pain can continue, or new pain can occur after surgery.

Over years, the hip prosthesis may wear out or loosen. This problem should be less common with newer materials and techniques. When the prosthesis wears, bone loss may occur because of the small particles produced at the wearing surface. This process is called osteolysis.

If you have any specific concerns or questions, please do not hesitate to ask prior to your surgery.

Your recovery at home

Wound Care. You will have a suture beneath your skin. This suture does not need to be removed.

Avoid getting the wound wet until it has thoroughly sealed and dried. A bandage may be placed over the wound to prevent irritation from clothing or support stockings.

You may shower with a waterproof cover over the wound. If water gets under the dressing it should be removed at the conclusion of the shower, the wound pat dried (not rubbed) and a new dressing applied. A dressing should remain on for approximately 10 days or until the wound has stopped oozing. If the ooze continues beyond 10 days, contact the hospital or the rooms.

Diet. Some loss of appetite is common for several weeks after surgery. A balanced diet, often with an iron and Vitamin C supplement, is important to promote proper tissue healing and restore muscle strength. Be sure to drink plenty of fluids.

Activity. Exercise is a critical component of home care, particularly during the first few weeks after surgery. You should be able to resume most normal light activities of daily living within three to six weeks following surgery. Some discomfort with activity and at night is common for several weeks.

Your activity program should include:

- A graduated walking program, initially in your home and later outside
- Walking program to slowly increase your mobility and endurance
- Resuming other normal household activities
- Resuming sitting, standing, walking up and down stairs
- Specific exercises several times a day to restore movement
- Specific exercises several times a day to strength your hip joint

How your new hip is different

You may feel some numbness in the skin around your incision. You also may feel some stiffness, particularly with excessive bending. These differences often diminish with time and most patients find these are minor compared to the pain and limited function they experienced prior to surgery.

Your new hip may activate metal detectors required for security in airports and some buildings. Tell the security agent about your hip replacement if the alarm is activated.

Remember:

- Participate in a regular light exercise program to maintain proper strength and mobility of your new hip.
- Take special precautions to avoid falls and injuries. Individuals who have undergone hip replacement surgery and suffer a fracture may require more surgery.
- Notify your dentist that you have had a hip replacement. You will need to take antibiotics before any dental procedure for a minimum of two years after your surgery and possibly longer, depending on your past health history.

Follow-up after your surgery:

- You will be seen at six weeks post op with a repeat x-ray prior to the consultation. If you have any problems prior to this appointment please either contact the hospital or the rooms.
- You will then be seen at 6 months and 1 year.
- If there are no complications you should then be seen every 5 years for routine follow-up examinations and X-rays, even if your hip replacement seems to be doing fine.

If at any stage you have any questions or concerns, please ask.