PLEASE BRING THIS BOOKLET TO THE HOSPITAL WHEN YOU COME FOR THIS OPERATION.

Surgeon

Paul F. Lachiewicz, M.D.

© Paul F. Lachiewicz, M.D.
Contents

Introduction.................................................................................. 3
Normal Hip Joint.............................................................................. 4
Abnormal Hip Joint.......................................................................... 4
Total Hip Joint Replacement..................................................... 5
Non-Surgical Treatment of Hip Arthritis ....................... 6
Pre-Admission Information....................................................... 7
Pre-Operative Evaluation ............................................................... 8
Admission Information................................................................. 8
Day of Surgery................................................................................ 9
Following Surgery.......................................................................... 10
Physical and Occupational Therapy ....................................... 12
Summary of Hospital Stay............................................................. 15
Going Home..................................................................................... 16
Infection Prevention.......................................................................... 18
Results of Surgery........................................................................... 19
Complications.................................................................................. 20
Reoperation (Revision Surgery) .................................................. 23
Introduction

The purpose of this booklet is to provide you with basic information about total hip replacement. Total hip replacement is an operation that was developed in England in 1963 in which the diseased ball and socket of the hip joint are replaced with an artificial device. The socket, ball, and femoral components are made of metal and the socket has a plastic liner. At the present time, the socket is usually placed without bone cement, while the femoral (thigh bone) component may be placed with or without bone cement. The operation with bone cement has been performed in the United States since the early 1970’s and the operation without bone cement has been performed since 1984. Total hip replacement has proven to be highly successful in a large number of patients and is now a widely accepted procedure for patients suffering from a variety of hip disorders, including osteoarthritis, avascular necrosis, and rheumatoid-inflammatory arthritis.
Normal Hip Joint
The femoral ball fits into the pelvic socket. Both the ball and the socket are covered with cartilage that shows on x-rays as a darker space, commonly referred to as the joint space.

Abnormal Hip Joint
In arthritis, the cartilage is worn away and the joint is often deformed.
Total Hip Joint Replacement

The bony ball is removed and replaced with a metal component, and the bony socket is lined with an artificial material made of plastic.
Non-Surgical Treatment of Hip Arthritis

Arthritis can usually be treated non-operatively during its early stages. The non-surgical treatments include weight reduction, muscle strengthening exercises, activity modification, use of a cane, and medication if necessary. The first choice of medication for arthritis of the hip is acetaminophen (Tylenol). Usually two tablets (650–1,000 mg), two to four times a day, is helpful for the relief of pain. Other medications, known as non-steroidal anti inflammatories, such as aspirin, ibuprofen, Advil, Motrin, Aleve (available without prescription), or Clinoril, Feldene, Celebrex, Indocin (prescription) etc., may decrease inflammation in the joint and decrease pain. Cosamin DS (glucosamine and chondroitin sulfate) is a non-prescriptive nutritional supplement which may reduce pain in the early stages of hip arthritis.

Muscle strengthening exercises may maintain motion and preserve strength in the hip. Water therapy, pool exercises, or arthritis aquatics programs may be very helpful for pain reduction and maintaining joint motion. Pain in the hip is often brought on by certain activities, which can either be modified or stopped. A cane, usually carried in the opposite hand, can reduce joint loading by as much as 15%. Each pound of weight lost diminishes joint loading by over three pounds and this is very important for pain reduction and slowing the progression of arthritis. We strongly recommend against surgery if your weight is more than 235 pounds as the risk of infection and other complications is much higher.
Pre-Admission Information

Patients contemplating this surgery are encouraged to see their private physician (internist or family practitioner) to be checked medically before surgery. If you have not seen a dentist in the past year, this examination is also recommended prior to surgery.

Blood transfusion

Patients may require a blood transfusion after total hip replacement. Bloodborne diseases and allergic reactions are the major complications of a transfusion. The screening procedures at the blood bank are as thorough as possible and the risk associated with blood transfusion is exceedingly small. It is no longer recommended that patients donate blood prior to surgery.

Pre-Operative Evaluation

You will come to our office one to two weeks prior to surgery for examination tests to see that your general health is satisfactory. You will have blood drawn and a urine specimen will be obtained at the hospital. X-rays of your chest and an electrocardiogram (EKG) to check your heart will also be performed.
X-rays of your hip will be made if we do not have films taken within the past six months. A consent form for surgery will be signed.

Spinal anesthesia is strongly recommended because there are fewer complications. Less bleeding and fewer blood clots occur with spinal anesthesia. You will receive antiseptic soap before you leave the hospital. It is very important that you take a thorough shower with this antiseptic soap the morning of surgery.

**Admission Information**

You should not eat or drink after midnight the night before surgery. It is most practical to bring T-shirts, short gowns, shorts, or sweat pants to the hospital. Long gowns and robes interfere with walking. Bring a pair of shoes (or sneakers) that you are accustomed to wearing; bedroom slippers usually don’t give the foot enough support. Any lifts on the heel or sole will need to be removed. This is not a good time to “break in” new shoes. If you have your own walker or crutches, please bring them with you to the hospital.
Day of Surgery

Come to hospital at the specified time and white compression stockings will be provided. Blood may be drawn in this area. You will have any hair on your hip or thigh clipped with an electric razor. The pneumatic sleeves will be placed on both legs. You will be taken to the Operating Room holding area. An intravenous line will be placed in your arm. In the operating room a urinary catheter will be inserted and left in place for one to two days.

The anesthesia and surgery usually take three to four hours. From the operating room, you go to the recovery room for one to three hours. The nurses there will take your blood pressure and pulse frequently. The intravenous (IV) fluid will still be running. You will be wearing the white compression stockings and pneumatic sleeves on both legs. An X-ray will usually be taken in the recovery room.

After going to your room, the nurse will continue to check your blood pressure, pulse, and have you cough and breathe deeply. The IV will continue to run for approximately twenty-four hours. There will be a dressing over the hip incision and there may be a drainage tube coming from the hip. If placed, the drainage tube will be removed in twenty-four hours.

You may take sips of fluids as soon as you are awake if you are not nauseated. Your food intake will be advanced as tolerated. You will need to take deep breaths at frequent intervals and cough out the mucus that accumulates in your lungs during and after surgery. It is very important that you do this to keep your lungs fully expanded and free from infection.
Following Surgery

You will be given exercises and encouraged to move about in bed. These exercises will help prevent blood clots and improve the motion in the hip. You cannot turn over or get out of bed by yourself.

You will not have to lie flat all the time. You may raise the head of your bed periodically. You will have a catheter in your bladder for two days. After it is removed you will have to use the bedpan or bedside commode. A laxative will be ordered for you if you should need it.

Pain should be expected after any surgery. You will have some pain in your hip and back after the operation. Some patients require only oral medication for pain following surgery, while others require that the medication be given by injection. Others may need frequent intravenous pain medication through the use of a PCA machine. The postoperative pain that you will experience is expected and perfectly normal. The nurse will ask you to note the severity of your pain before and after giving you pain medication. The discomfort after surgery is usually different from the pain you have before surgery and it will soon lessen in severity.

While you are in bed, you may eat normally and should drink large amount of fluids to keep your kidneys functioning properly. You should continue to cough and breathe deeply to keep your lungs working. You will wear compression stockings and pneumatic sleeves on both
legs. You should begin to do your exercises in bed shortly after arriving to your room.

1. Bend your feet up and down at the ankles, you can feel your calf muscle tighten. This motion helps your circulation by pumping blood from your legs back to your heart.
2. Tighten the muscle above your knee (quadriceps) by pushing your knee down toward the bed.
3. Tighten the buttocks together.
4. Roll your knees slightly in and out.

It is important that these exercises be done five to ten times every hour and that you exercise both legs. The exercises must be done slowly, tighten for the count of five and then relax for the count of five. You will make your muscles sore if you do the exercises too fast. These exercises improve circulation and strengthen the muscles that help hold your hip in place; so that when the day comes for you to get up, you’ll be ready. Use the overhead trapeze to strengthen your arms and to reposition yourself while in bed.

On the first day after surgery you will begin getting up to walk with the physical therapist (PT), at first with a walker and later with crutches. The distance you walk and the weight you bear will be determined by your surgeon, therapist, and you. Discomfort at this point is usually muscular and is normal. You usually do not walk far the first time you are up, but the distance improves each time. Your operative leg may seem longer at first. This usually feels better in a few weeks. After surgery
only elevated seating is advised, such as sitting on pillows in a chair and using an elevated toilet seat. However, we recommend that you sit for no longer than sixty to ninety minutes at a time for the first six weeks after surgery and for no more than three to four hours per day.

Physical and Occupational Therapy

On the first day after your operation, you will begin Physical Therapy. You will begin exercises and review precautions to protect your new hip. Physical Therapy will continue twice a day until you go home. You will work on walking farther distances and practice going up and down steps.

After your surgery, you will also see an Occupational Therapist who will help you practice tasks that will make it easier for you to take care of yourself at home, such as going into the bathroom and getting yourself dressed. On the second or third day after surgery you should be ready to go home. You will have your own walker or crutches and instructions for continuing exercises. If you need further therapy after you leave the hospital, the social worker will make arrangements for someone to visit you at home or for transfer to a rehabilitation unit. However, most total hip replacement patients do not require physical therapy at home.
1. Dorsal and Plantar Flexion
(Point your toes toward your head, then away from your head)

Dorsal

Plantar

2. Quadriceps Setting
(Press the back of your knee against the bed)
3. Gluteal Setting
(Pinch your buttocks together)

4. Internal and External Rotation
(Slightly rotate your legs inward, then outward)
Summary of Hospital Stay

Day of Surgery
Come to the hospital for admission. Surgery is performed. You are then transferred to the recovery room, then to the hospital room.

Postoperative Day 1
You will have an intravenous line in your arm, a catheter in your bladder, and possibly a drain in your hip. Exercises will be performed in bed. Physical Therapy and Occupational Therapy will begin.

Postoperative Day 2
The intravenous line, drain in your hip, and the bladder catheter will be removed. Physical Therapy will be provided twice a day. Occupational Therapy will be provided. The dressing will be changed to dry gauze and waterproof Tegaderm covering. You may be able to be discharged home with family.

Postoperative Day 3
Physical Therapy will be provided once or twice. Occupational Therapy will be provided. If you are progressing well, you may be able to go home. Discharge to home with family or transfer to a nursing home or rehabilitation unit, if necessary.
Going Home

You will usually be able to go home about two or three days after surgery. There are a few things that you will not be able to do for yourself for three or four weeks. You will need some help in the morning and evening with dressing and bathing. Be as active as possible when you return home. You should slowly increase what you have been doing in the hospital. You will be given an appointment for your return visit to your doctor, usually about two to three weeks after surgery.

You should spend most of your time either lying down or walking, rather than sitting. We recommend that you sit for no more than three to four hours a day for the first six weeks. USE BOTH CRUTCHES OR A WALKER AT ALL TIMES FOR THE FIRST SIX WEEKS AFTER SURGERY.

Continue the same exercises that you were doing in the hospital:

1. Bend your feet up and down at the ankles, you can feel your calf muscle tighten. This motion helps your circulation by pumping blood from your legs back to your heart.
2. Tighten the muscle above your knee (quadriceps) by pushing your knee down toward the bed.
3. Tighten the buttocks together.
4. Roll your knees slightly in and out.

Each exercise should be done five to ten times hourly while awake.
Remember to walk correctly, as your therapist has stressed. Walk as much as possible but DO NOT overtire yourself. It is better to take short, frequent walks than one long walk. After the staples are removed, you may walk outdoors, go to a shopping center or grocery store with long aisles. You should lie down and rest after your walk.

When sitting, use a chair with arms and a firm seat. DO NOT sit in lawn chairs, recliners, lounge chairs, or sofas. It is important that you DO NOT sit often or long. You should only sit for meals and short visits, but never more than sixty to ninety minutes at a time without getting up and stretching or taking a short walk. Remember to keep your legs apart when you are sitting. DO NOT cross your knees or legs.

When riding in a car to go home, you should stop and stretch about every thirty minutes. Remember, DO NOT sit for longer than sixty to ninety minutes at a time and DO NOT sit more than three to four hours each day for the first six weeks.

Wear your elastic stockings for the first six weeks after surgery to decrease the swelling of your legs. To shave, put on makeup, or wash dishes, you may stand without crutches. Stand with equal weight on both feet.

The staples or sutures will be removed about two to three weeks after surgery. You may shower provided the dressing is dry and well fixed.

Most of these instructions apply only until your six week check-up. When you get home, if you find there
is something new or different that you have a question about, please contact your nurse, physical therapist, or surgeon. It is a good idea to make a list of any questions a few days before you go home.

This information is intended to help you understand your surgery and your care; it does not replace talking with your doctor, nurse, and therapist.

Every patient is unique, so your care may differ somewhat from that of other patients. Differences are expected.

**Infection Prevention**

Although this is controversial, we recommend that joint-arthroplasty patients receive routine antimicrobial prophylaxis before dental work (having teeth cleaned, filled, or pulled) for two years, thereafter only for deep dental work. The prescription for the medication should be given by the dentist. We recommend Keflex 500 mg two hours before dental treatment and 500 mg six hours after the first dose; or penicillin VK, two grams one hour before dental treatment and one gram six hours after the first dose. In patients with allergies to penicillin and/or Keflex, we recommend erythromycin, one gram two hours before manipulation and 500 milligrams six hours after the first dose. These should be prescribed by the dentist.

If you have a bladder or bowel infection, internal examination, or surgery, antibiotic prophylaxis is also suggested. Contact your medical doctor first. If sores or ulcerations develop on your lower legs or feet, contact
your medical doctor immediately. Infection can spread by the bloodstream to your replaced hip.

Results of Surgery

You will leave the hospital walking with crutches or a walker and will use them until your postoperative visit approximately six weeks after the operation. At that time you may be progressed to walking with a cane. You should use the cane until you can walk well without it, usually another six weeks. Over the following year, you will continue to gain strength and endurance and your hip will get stronger. You should not drive a car until six weeks after the operation because your reflexes are slow. Most people are able to return to light work for limited periods of time at about three months following the operation, to a full day’s work at a desk job at three to four months, and to light labor at four to six months. You may swim three to six months after the operation. Golf may not be comfortable until six months or so after surgery. You may ride a bicycle, dance, or participate in water aerobics six months to a year following the operation. Running and other strenuous sports should not be performed at any time.

Based on our experience to date, you have a 97% chance of having what we call a good result. This means you will be able to walk with no or a slight limp, little or no pain, without cane or crutches, as far as you want to walk. The result and your function may be affected by other medical, spine, or joint problems. Motion will
be sufficient to permit you to sit and stand normally and very likely to put on your socks and shoes. In other words, you should be able to do most of what you need or want to do. You will not have a normal hip. The purpose of the operation is to give you a hip that functions significantly better and with less pain than your arthritic hip. With common sense you should be able to live a reasonably normal life. You should return to see your surgeon at six weeks, six months and one year after the operation. Thereafter, examination and x-rays of the hip are required on a yearly or every two year interval.

Complications

There are two categories of complications: those that could occur early in the post-operative period (first six months) and those that may occur many years after surgery. Early complications will be discussed first.

Death

Based on our experience, there is a 3 out of 1,000 chance of dying due to a heart attack, stroke, or blood clot to the lung during the first ninety days after surgery. This chance is very small, but there is some risk of death involved in any operation, including this one.

Infection

There is also a small (<1%) risk of infection following primary (first time) total hip replacement. Patients with diabetes, psoriasis, taking steroids, or with prior
infections have a greater risk of infection. If you develop an infection in the artificial hip, the prosthesis usually has to be removed to cure the infection. It is often possible to insert a new prosthesis after treatment of the infection. Otherwise you will need a cane, crutches, or a walker for the rest of your life. To prevent infection, we give you an antibiotic before and after surgery. Space suits are worn by the surgical team and ultraviolet lights are used to protect the operative wound from contamination.

**Dislocation**

This complication (ball coming out of the socket) is more likely to occur early than late. You have about three chances in one hundred of dislocating your hip. It usually occurs from a sudden unprotected or thoughtless movement, as from a fall or crossing your legs. The dislocation can usually be reduced by traction of the leg under anesthesia. The need for another operation to correct this problem is uncommon.

**Other Orthopaedic Problems**

Other things that can go wrong with your replaced hip joint include loosening of the components, excessive wear of the plastic liner in the socket, and formation of bone or scar tissue about the hip, which limits motion. These are usually late complications that occur in only a small percentage of cases, although additional surgery may be required for their correction. Loosening of the metal component from the thigh bone or the socket from the pelvic bone is the major long-term problem of total hip replacement. With modern protheses, the rate of
loosening should be less than two percent at ten years. Wear of socket plastic may be a serious problem requiring reoperation at ten or more years.

A piece of bone (greater trochanter) is sometimes detached from the thigh bone and then reattached with wires. This improves the exposure of the joint. This bone and its attached muscle can come loose or be slow to heal. You can develop irritation over the wires that were used to reattach it and these may need to be removed.

Although extremely rare, nerve damage can result in permanent partial paralysis of the muscles that move the ankle and foot.

**General Medical Complications**

These complications affect organs other than the operated hip. Total hip arthroplasty is major surgery, which can affect almost any organ in the body including the lungs, heart, vascular system, neurological system, gastrointestinal, and genitourinary systems. While these complications can result in severe illness or death, these outcomes are rare. One of the more common complications is venous thrombosis, or clots forming in the veins of the lower limbs. This complication becomes more severe if these clots dislodge and go to the lung causing a pulmonary embolism. Other pulmonary problems include pneumonia and atelectasis (areas of lung collapse). After surgery you will be instructed on exercises to decrease the likelihood of these pulmonary
complications. When they do occur, they can usually be managed with medication.

You must understand that the risks of these complications, although relatively small, cannot be avoided. Therefore, you must compare how you feel and get around at the present time with the way you can expect to be after the operation to decide if there is enough to gain by the operation to make it worth taking these risks. Your surgeon will not agree to do the operation unless, in his judgement, you can be made better enough to make it worthwhile. However, you are the only one that can decide whether or not to have the operation.

You should carefully consider the advantages and disadvantages of the operation before making a decision. If you decide to have the operation, it is exceedingly important that you develop a positive attitude toward the operation and the postoperative period. Your attitude and cooperation have a lot to do with how well you do.

Reoperation (Revision Surgery)

As mentioned earlier, it is sometimes necessary to replace the artificial parts if they become loose or if the plastic liner wears out. The procedure is generally similar to the original operation, but there are important differences.

The operation involves taking the hip apart and removing the artificial parts. It is usually necessary to remove the cement and any soft tissue that has formed
between the cement and the bone. Loose or worn hip components are replaced. It is usually possible to insert new revision hip components.

Another development useful in special circumstances is the use of a bone graft or metal augment when a large amount of bone has been destroyed. We will discuss this with you in greater detail if we think it might apply in your case.

If adequate bone remains or can be provided, a new joint is inserted. This is a longer and more extensive operation than the original procedure. You will be in the hospital about three to four days after the operation and the remainder of the postoperative course is very similar to the original operation.

All of the complications mentioned for the original operation apply to a reoperation. However, there is a much higher rate of infection (5%) and dislocation, as high as 20%. For this reason we often recommend that you wear a hip brace full-time for six weeks. The results of a reoperation may be similar to the original operation. However, because the operation is much more extensive and because bone may have been lost, the risks are higher and the results somewhat worse than if the operation were being done for the first time.