UNIVERSITY of MARYLAND
ST. JOSEPH MEDICAL CENTER

Total Hip Replacement

1. **What are the surgical options for the arthritic hip?** When non-operative treatments for hip pain due to arthritis fail to work, surgery may be indicated. The surgical options include hip arthroscopy, osteotomy, resurfacing and total hip replacement.

    a. **Role of arthroscopy.** Hip arthroscopy is usually an outpatient procedure to repair torn cartilage (aka the labrum) and to remove extra bone that occurs in the very earliest stages of arthritis using small stab incisions around the hip to allow for insertion of the arthroscope (tiny camera). It is rarely indicated for patients over 50 years of age.
    b. **Role of osteotomy.** Femoral and acetabular osteotomy surgery involves cutting the bone to reorient the hip joint for conditions with structural abnormalities. It is extensive surgery that requires the insertion of plates and screws to fix the bone while it heals. It requires inpatient hospitalization for several days and recovery usually takes 6-12 weeks. Osteotomy is also rarely performed beyond the age of 40.
    c. **Role of resurfacing.** Hip resurfacing is a type of hip replacement that is usually reserved for young active males. It is a metal-on-metal device where the hip ball is capped. It usually requires inpatient hospitalization for several days and recovery usually takes 6-12 weeks. This procedure has recently fallen out of favor and now has few indications.
    d. **Role of Total Hip Replacement.** Total hip replacement is the gold standard for disabling hip pain. It can be indicated in all ages, sexes, and activity levels, although generally speaking it is best to do after the age of 60 because of the risk of reoperation after 15 to 20 years due to mechanical failure. It can be performed through various approaches (front, back, side) with various implant designs. Currently the most common designs are made out of titanium with metal heads against the newest plastics. Other materials may be used for the head/ball and liner (e.g., ceramics) in selected cases. It is extensive surgery that requires inpatient hospitalization for 1-3 days, and recovery usually takes 6-8 weeks.

2. **Total Hip Replacement**

    a. **When do I decide to have it done?** The preliminary step in this evaluation is to meet with your surgeon to see if you are a candidate for total hip replacement. This will commonly involve a history, physical examination, and X-rays of the involved hip and pelvis. Even if the pain is significant and the X-rays show advanced arthritis of the joint, the first line of treatment is nearly always non-operative, to include weight loss if appropriate, an exercise regimen, medications, injections, or using a cane. If the symptoms persist despite these measures, then a patient would consider total hip replacement. The decision to move forward with surgery is not always straight forward, and usually involves a thoughtful conversation with yourself, your loved ones, and ultimately your surgeon. The final decision rests with the patient, and is based on the pain and disability from the arthritis influencing the patient's quality of life and activities of daily living. Patients who decide to proceed forward with surgery commonly report that the symptoms from the hip keep them from participating in activities important to them (i.e. walking, work, sleep, putting on socks and shoes, sitting for long periods of time, etc.), AND have been non-responsive to the non-operative measures.

b. **How long do they last?** It is often quoted that total joint replacements last "15-20 years". This is not the ideal way to interpret the longevity of total joint replacements. The more accurate way to think about longevity is via the annual failure rates. Most current data suggests that both hip and knee replacements have an annual failure rate between 0.5-1.0%. This means that if you have your total joint today, you have a 90-95% chance that your joint will last 10 years, and 80-85% that it will last 20 yrs. With improvements in technology, these numbers may improve.

c. **What is minimally invasive surgery, and how big is my scar?** Minimally invasive surgery is a term that today describes a combination of reducing incision length and lessening tissue disruption beneath the incision. This includes cutting less muscle and detaching less tendon from bone. Combined with these techniques are the advanced techniques of anesthesia and pain management that take place around surgery. All of this combines to allow patients to feel better, have less pain, and regain function faster than in the recent past.
The size of the incision is variable, and depends on several factors that include the size of the patient, the complexity of the surgery, and surgeon preference. Most studies have shown that smaller incisions offer no improvement in pain or recovery and may actually worsen the surgeons' ability to adequately do the procedure.

d. **When will my scar disappear?** The scar will heal within a few weeks, but then will remodel and change appearance over the course of 1-2 years. The color often fades and smooths over time to blend into surrounding skin, but will likely never fully disappear. There will be significant variability on the final appearance of any individual scar based on the specific surgery and patient variables.

e. **Do I have to have general anesthesia?** No. While general anesthesia is a safe option, both hip and knee replacements can be performed under regional anesthesia. Choices for regional anesthesia include spinal anesthesia, epidural anesthesia, or one of a variety of peripheral nerve blocks. Many surgeons and anesthesiologists prefer regional anesthesia because of data showing it can reduce complications and improve the patient experience (less pain, less nausea, less narcotic medicine required, etc.).

f. **Is there a difference between different types of approaches?** When a hip is replaced the way a surgeon gains access to the hip is referred to as an "approach." There are various types of approaches named according to the direction that the surgery is performed. The most common approach today is referred to as the "posterior approach" and this is done from the back of the hip. Some more recent improvements to this approach (small incision and less tissue trauma) have been called "mini posterior approach." Another currently popular approach is known as the "anterior approach," because it is preformed from the front of the hip. The lateral approach is less popular. There are pros and cons of each approach and little science to endorse one over the other. A conversation with your surgeon should help decide which approach in the best for each patient.

g. **Are there different types of hip replacements?** Most implants today have become more similar than different as surgeons and manufacturers have determined which designs work best. One variable that still remains is the bearing surface. The bearing surface is ball and liner that attach to the stem and cup that fix to the bone. The ball can be composed of either metal (cobalt chromium alloy) or ceramic, and the liner can be made of plastic (polyethylene), metal, or ceramic. The ball and liner can then be used in different combinations and are named for the respective ball liner combination (metal on poly, ceramic on poly, ceramic on ceramic, etc.). In 2013, a vast majority of bearings utilize a polyethylene liner with either a metal or ceramic head, with other combinations used with lesser frequency. Having this discussion with your surgeon is best to detail the differences.

h. **Is there a role for a computer, custom cutting guides, or a robot for my surgery?** This question is the subject of many studies that are attempting to evaluate these emerging technologies and their influence of the success of surgeries. In general these technologies have been more popular in total knee replacement than total hip replacement. To date, there appears to be no clear advantage of these technologies, but more research is required to determine what advantage, if any, these may offer. The best approach is to discuss this topic with your surgeon.

i. **How long do I stay in the hospital?** Most patients will stay in the hospital for 1-3 days depending on rehabilitation protocols used and how fast they progress with physical therapy. This is highly dependent upon preoperative conditioning, age, and other medical problems that may hinder a patient's ability to rehab.

   You should begin planning for your discharge from the hospital before your surgery. There are basically two options for you to consider and plan for your discharge from the hospital.

   - Discharge to Home: If you go directly home from the hospital, any needed equipment and in home physical therapy will be arranged for you by the staff of the Integrated Care Management Department (ICM) of UMSJMC or your discharge planner.
   - Discharge to Inpatient Rehab: If you go to an inpatient rehabilitation facility, those arrangements are made by the staff of the ICM Department. Factors such as your progress in physical therapy, insurance benefit coverage and bed availability determine which facility you are eligible to go to. Your transportation to the rehab facility is provided by family or designee or wheelchair van, which is a personal expense if not covered by your insurance. You are encouraged to take the opportunity now, before you surgery, to investigate and visit rehabilitation facilities. It is best to have at least 2 or 3 alternative facilities of your choice. Your discharge planner will facilitate the process while you are in the hospital. Contact your insurance to verity a benefit/coverage for inpatient rehabilitation. Your length of stay in an inpatient rehabilitation facility, should you go there, is based upon your progress in physical therapy and your insurance benefit coverage.

j. **Is THR very painful?** Pain management following total hip replacement has come a long way over the last 10-15 years with increased use of regional nerve blocks, spinal blocks, and various other modalities used for pain control. Early range of motion and rapid rehab protocols are also designed to reduce early stiffness and pain, making the procedure in general much less painful than in years past. However, patients handle and perceive pain differently and as such; some patients may have relatively mild pain following the procedure while others may have a more difficult time. Some form of pain medication is usually necessary for several weeks post op. Take pain medication as directed. We recommend you take pain medicine 1 hour before any physical therapy/exercise session. Always take pain medication with food in your stomach to prevent nausea. You should avoid alcohol intake if you are taking narcotics. Alcohol interacts with these medications. You may switch to Tylenol/ acetaminophen as desired.

   *For Pain medication refills, have your pharmacy call your surgeons office at 410-337-7900. Plan ahead for your weekend supply. Prescriptions cannot be refilled on the weekends.

k. **How long does it take to recover?** Most hip replacement patients are able to participate in a majority of daily activities by 6 weeks. Overall by 2 months most patients have regained much the endurance and strength lost around the time of surgery and are able to participate in daily activities without restriction.

l. **Do I need Physical Therapy, and if so, how long?** Initially most patients will receive some physical therapy while in the hospital and depending on preoperative conditioning and support, may or may not need additional therapy as an outpatient. Much of the therapy after hip replacement is walking with general stretching and thigh muscle strengthening which many patients can do on their own, without the assistance of a physical therapist.

   If you go directly home from the hospital, you will have in-home physical therapy about 3 times a week, for 2 weeks. It is advisable to continue physical therapy on an outpatient basis after you are discharged from in-home physical therapy. You should call the outpatient physical therapy facility soon after arriving home, to schedule your first appointment (for the third week after surgery). This is to prevent a lag in your progress. You can call Towson Sports Medicine in Towson at 410-337-8847, in Bel Air at 410-569-8587, or a facility of your choice that is within your insurance network to make appointment.

   It is your responsibility to schedule your appointments. We recommend a physical therapy facility that has a pool. Towson Sports medicine has a pool on site. While pool therapy is helpful, it is not mandatory. Your insurance company can tell you which facilities are covered under your plan.

   If you go to an inpatient rehab facility or transitional care unit from the hospital, you should contact the Out Patient Physical Therapy Facility as soon as you arrive home to set up appointment to continue your physical therapy.

   You will also be taught a series of exercises that you can perform on your own without supervision. For the first 6-12 weeks after surgery you should spend some time each day working on both flexion and extension of your hip. It is a good idea to change positions every 15-30 minutes. Avoid a pillow or roll under your knee. A roll under the ankle helps improve extension, prevent a contracture, and relieve pressure on the heel. Aquatic exercising, swimming, and exercise bike are good exercise options, and can be continued indefinitely and independently.

You are allowed to climb stairs as desired. You will lead with your non-operated leg going up stairs, and lead with your operated leg when coming down. Gradually, as muscles get stronger and your motion improves, you will be able to perform stairs normally.

m. **When can I walk after surgery?** Utilization of progressive rehab protocols which emphasize increasing mobility and activity, aids a quicker recovery. You will be out of bed, sitting in a chair and walking beginning the day of, or the day after the surgery. You will attend physical therapy sessions two times a day starting the morning after your surgery. You will use a walker at first and, depending on your progress, and may practice walking with a cane before you are discharged. There are exercises to achieve mobility and strengthen the muscles around the hip replacement, but initially these are relatively easy. You will wean to a cane or no assistive device by 2-3 weeks postoperatively.

n. **When can I shower?** Most surgeons do not like the wound to be exposed to water for 5-7 days. However, becoming more popular with surgeons are waterproof dressings that allow patients to shower the day after surgery. Patients then remove the dressing at 7-10 days after surgery. Once dressings are removed you still shouldn't soak the wound for 3-4 weeks until the incision is completely healed.

o. **When can I drive?** If you had surgery on your LEFT hip, you may return to driving as you feel comfortable, if you have an automatic transmission. If surgery was on your RIGHT hip, you should not drive for 1 month, 4 weeks after surgery. However, do not allow their patients to drive until after they have been seen in the office at 4-6 weeks after surgery. Check with your surgeon for more specific direction.

p. **When can I return to work?** Returning to work is highly dependent on the patient's general health, activity level and demands of the job. Depending on the type of job, you may resume work whenever you feel able. More demanding jobs requiring more lifting, walking, or travel may need up to 3 months for full recovery. Always discuss your plan with your surgeon to obtain the proper clearance to resume work.

q. **What are the major complications following THR?** Total hip replacement is an excellent pain relieving procedure and most patients receive approximately 95% pain relief. Although complications are relatively rare (1-5% of patients), patients may experience a complication in the postoperative period. These include very serious and possibly life threatening complications such as heart attack, stroke, pulmonary embolism a blood clot to lungs and kidney failure. Infection is one of the most debilitating complications and often may require prolonged antibiotics with additional surgeries to rid the infection. A blood clot in the leg is also a relatively uncommon complication requiring some type of blood thinner following surgery to reduce the incidence. Another complication specific to hip replacement is dislocation of the joint (1%) that may require additional surgery if dislocation becomes recurring. Leg length differences following surgery are also a possibility and may be difficult to avoid sometimes in order to insure a stable hip. Often this leg length discrepancy is mild and rarely needs treatment.

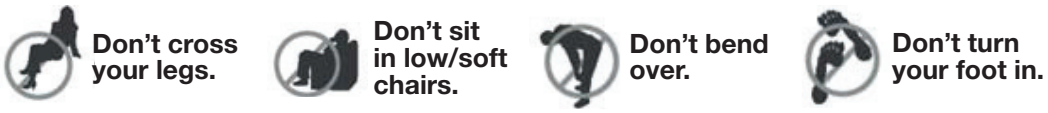
More Information on Blood Clot Prevention

- A combination of treatments is used to help prevent this complication. They include; early mobilization, compression stockings, and medication.
- If you do not take Coumadin/Warfarin on a permanent basis before surgery, then you should take Ecotrin, 1 tablet (regular strength, 325mg tablets coated aspirin), twice a day (1 tablet in the morning and 1 tablet in the evening) for 6 weeks after surgery.
- If prescribed Coumadin, Xarelto pills or Fragmin injections for blood clot prevention, you should continue this until the prescription is finished.
- If you are taking Coumadin/Warfarin, Fragmin or Xarelto, DO NOT take Ecotrin. Be sure to have INR time levels checked, while taking Coumadin/Warfarin.
- T.E.D Stockings (white elastic stockings) – Put on first thing in the morning and remove when going to bed in the evening. These are important to control swelling. Wear for 6 weeks after surgery.
- You should avoid alcohol intake if you are taking Coumadin/Warfarin, or Fragmin, or Xarelto as a blood thinner. Alcohol interacts with these medications.

r. **What can I do/not do after hip replacement surgery?** Depending on how your surgeon performs your surgery, you may have slight differences in your rehabilitation instructions including restrictions. In general most surgeons prefer that you avoid certain positions of the hip that can increase your risk of dislocation of the hip for about 6 weeks following surgery. After 6 weeks the soft tissues involved in the surgery have healed and restrictions are often lifted allowing more vigorous activity. Many surgeons suggest that patients avoid any repetitive impact activities that can increase the wear on the implant such as long distance running, basketball, or mogul skiing. Otherwise limitations following hip replacement surgery are few.

Hip precautions

- Avoid pivoting your leg
- Sleep on your back or operated side only for 6 weeks after surgery or as directed by your surgeon



s. **Early Post-Operative Recovery Period (Your First 4-6 weeks)**

Operative Site Care:

Staples are removed 10-14 days post-op, as long as there is no discharge at the incision site. This will be done by a visiting nurse or physical therapist if at home or by the rehabilitation staff if in a rehabilitation facility.

Your Total Joint Replacment can be totally immersed (for bath or swimming for instance) two weeks after surgery, as long as the wound is completely healed, and staples have been removed for 3-4 days.

Bruising is common after surgery. It may be quite dark in appearance. This is normal. The bruising may extend up the thigh, into the groin and buttock, or down into the ankle and foot before it is completely gone is several weeks.

You may have a small area of numbness to the outside of the scar, following a hip replacement. This may last up to one year or more.

The dressing will be changed prior to discharge from the hospital. It should be left on for 7-10 days. The dressing is waterproof and will protect the incision while you shower. After the 7-10 days, remove the dressing and leave the incision open to air until the staples are removed. While open to air, DO NOT, get the incision wet until 24 hours after the staples have been removed.

You may notice some drainage from the incision upon discharge from the hospital as you increase your mobility/activity at home. This drainage may last 24-48 hours. If drainage persists beyond this time, contact the office for further instructions.

Swelling: Activity related swelling in the operative site that extends down into the same side lower leg, ankle, and foot is normal. Initially after discharge from the hospital, postoperative swelling may increase due to increased activity, mobility, and physical therapy. The more active you are, the more swelling you may note.

ICE. Applying Ice to the operative site for 20 minutes per hour will help reduce swelling. It is recommended to do ice application a minimum of four times a day and as often as every hour.

The swelling should recede after ice and elevation or early in the morning prior to your being active and mobile. The swelling will become more pronounced gradually throughout the day toward evening time. Postoperative swelling can take up to one year after surgery to resolve.

Constipation: Constipation is common due to a number of factors, including narcotic pain medications. If taking these medications over-the-counter, non-prescription stool softeners and laxatives, including suppositories and enemas are recommended. Drinking lots of fluids, especially water and fruit juices, is also helpful.

Fever: It is normal to note a low grade fever for 2 weeks after surgery. This is caused by blood in the skin and muscle layers around the surgical site. Blood is an irritant and the body's response is for a slight fever to occur. A fever or 101^{o}F/35.5^{o}C or more should be reported to the office for further direction.

Insomnia: Insomnia is a common complaint following your hip replacement. It can last about 6 to 8 weeks. Non-prescriptive remedies such as diphenhydramine (BENADRYL) may be an effective sleep aid. If insomnia continues, prescription medication may be necessary.

Depression: Depression is not an uncommon feeling after joint replacement or any major surgery. Limited mobility, discomfort, increased dependency on others, and medication side effects can be factors that contribute to this feeling. These feelings will typically fade as you begin to return to regular activities. If your feelings of depression persist, consult your family doctor.

3. Long term total joint replacement resource information

a. **How long do I have to follow up?** It is important to follow up with your surgeon after your joint replacement. In most cases, joint replacements last for many years. You need to meet with your treating doctor after surgery to insure that your replacement is continuing to function well. In some cases, the replaced parts can start to wear out or loosen. The frequency of required follow up visits is dependent on many factors including the age of the patient, the demand levels placed on the joint, and the type of replacement. Your physician will consider all these factors and tailor a follow-up schedule to meet your needs. In general seeing your surgeon every 1-2 years is recommended.

b. **Do I need to take antibiotics for certain procedures and how long?** This is a controversial topic. The American Academy of Orthopedic Surgery (AAOS) and American Dental Association (ADA) have generally recommended short term antibiotics prior to dental procedures (1 dose 1 hour prior to dental procedure) for patients with joint replacements. This recommendation continued up to 2 years after the joint replacement. Beyond two years after the replacement, continued use of antibiotics prior to dental procedures has been based on the discretion of the treating surgeon and the patient based many factors including whether or not the patient was at increased risk of infection due to immune suppression (i.e., diabetic, transplant patients, and rheumatoid arthritis). The use of prophylactic antibiotics prior to dental cleanings and other invasive procedures remains controversial. Most orthopaedic surgeons now recommend lifetime suppression. Patients should discuss whether or not they need antibiotic prior to dental or other invasive procedures with their treating orthopedic surgeon.

c. **Will my implant set off metal detectors at airports and courthouses?** Usually patients with joint replacements will set off metal detectors. It is unnecessary for patients to inform individuals performing screening for metallic objects (i.e., the Transportation Safety Administration- TSA) that they have had a joint replacement. However, patients will still require screening and will need to follow the directions of screening agents. It should be noted that there are millions of individuals with joint replacements and screening protocols recognize that patients with joint replacements may set off detectors. No specific documentation is required from patients to prove they have a joint replacement. Metal detector screenings follow universal protocols that allow for individuals with joint replacements to proceed after confirmation that no threat.