The Total Hip Replacement Patient Manual

Robert S. Gorab, MD

Steven L. Barnett, MD

Jay J. Patel, MD

Travis S. Scudday, MD

3rd Edition

Table of Contents

Introduction and Philosophy

You have been diagnosed with end stage arthritis. While this problem has seriously affected the quality of your life, there is a treatment. You have decided to proceed with a joint replacement. This manual contains information on all aspects of your upcoming care, including preadmission, admission, surgery, rehabilitation, and follow-up care. If any of your care contradicts this manual, feel free to ask questions. If something could be done better, **anything**, please bring it to the attention of any member of the Total Joint Team. We ask that you read this manual in its entirety, sign a form that you have done so and understand all the material.

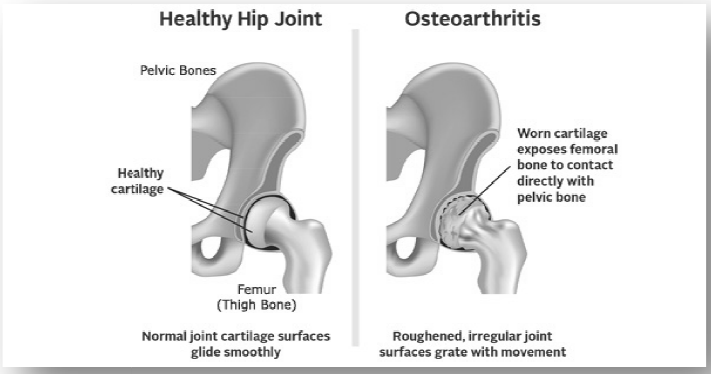
It is the philosophy of the Total Joint Team to focus on all aspects of care so as to increase your satisfaction; not only with the surgery itself, but also with the process you go through before and after surgery. Objective data about you will be collected but also, your subjective evaluation (your opinion) will be asked for, and expected, along the way. The main indication for total joint replacement is pain. Pain relief is reliable and we expect to be able to relieve most, if not all, of your pain. This is achievable in more than 95% of patients in nationwide groups of patients and in our own patients. We will try any other method before surgery to relieve your pain if it is at all possible. However, if there is bone to bone contact, surgery is often necessary. The other primary indication for total joint replacement is poor function. A successful replacement should provide a stable limb that, although not like a normal joint, will provide good to excellent function in more than 95% of patients. Other reasons for surgery exist and if applicable, have been discussed with you.

Arthritis simply means loss of cartilage within a joint. Cartilage is the soft covering over the bone ends forming the joint. When this covering is lost, the joint becomes painful, stiff, and function is lost. There are three major types of arthritis that are treated with total replacement:

Osteoarthritis, or degenerative arthritis, is the most common type of arthritis and is defined by a loss of cartilage in a joint. Osteoarthritis can be hereditary in some instances and may also be related to excessive stress on the joint during the active years of a patient's life. It is also seen in patients that have abnormal joints either from birth, abnormalities that develop during adolescent growth, or from previous surgical treatment.

Rheumatoid arthritis is also known as "inflammatory arthritis" and can also be hereditary. This disease process is thought to be a rejection of the body's own tissues (autoimmune disease). Medication can control this disease but when the cartilage within the joint is destroyed, total joint replacement is the only option.

Post-traumatic arthritis is the third major type of arthritis often treated with total joint replacement. This problem is caused by an injury to the joint (such as with falls or car accidents) which can damage cartilage, bone, or both.



Total joint replacement is a relatively new operation, being in widespread use just since the early 1970's for total hip and late 1970's for total knee. Even though the technology is recent, it has progressed rapidly so that the long term results of many groups of patients, including our own, show total hips last greater than 20 years in more than 90% of patients whether they are cemented or uncemented.

In a total joint replacement, bony surfaces of the joint are prepared to allow application of metal and plastic devices to substitute for the destroyed cartilage and/or bone. The surfaces of cartilage areas of the bones are re-surfaced. The ligaments and tendons are, for the most part, preserved so that function of the joint is not compromised.

Total Hip Surgical Approaches

There are several surgical approaches utilized for total hip replacement surgery. There are risks and benefits to each surgical approach used. There are many factors that influence what type of surgical approach is used for your particular surgery.

The direct anterior approach is a less invasive, muscle sparring surgical approach through the front of the hip. This approach has a quicker recovery time, allows for the use of x-ray imaging to accurately position the implants at the time of surgery, and provides for a decreased risk of dislocation compared to conventional approaches. Patients who have this approach can usually drive sooner, use a walker or crutches for a minimal amount of time and generally have less post-operative pain as compared to more traditional approaches.

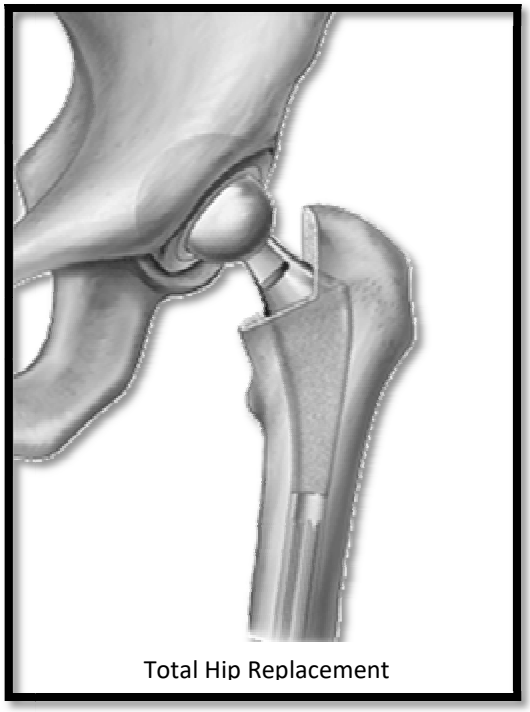
There are circumstances where your surgery cannot be performed utilizing a direct anterior approach and a posterior approach, traditional approach, for your hip surgery may have to be utilized. This will be discussed on an individual basis. This approach may increase the time of your recovery after surgery.

Regarding risks, one of the more common concerns with the anterior approach, other than those listed in the risk section of the manual, is a risk of superficial skin numbness on the front or side of the thigh that can result from this approach. In the event that numbness occurs, it usually diminishes over time. In a small percentage of patients, small areas of numbness can persist permanently but should not cause any functional limitations.

Your physical therapist in the hospital will explain the post-operative precautions and specific instructions regarding your hip replacement surgery to reduce the risk of dislocations.

Total Hip Bearing Surface and Fixation Options

Currently, there are many options in regards to implants and bearing surfaces. Hip replacements can be cemented or uncemented depending on bone quality to achieve long term fixation. These options will be discussed with you by the joint replacement team prior to your surgery at your pre-operative appointment.



Total Hip Replacement

Risks of Surgery

Risks of Surgery

A total joint replacement is major surgery. Complications are rare but we feel you should be aware of these in order to make an informed decision about your surgery. Some of the more common potential complications are outlined below and will be discussed with you in detail.

Infection

Infection occurs in less than 1% of all total joint replacements but if it does, it can be devastating. This can take the form of a superficial wound infection requiring antibiotics and/or operative exploration and cleansing, or a deep infection down to the implants which might require implant removal, placement of an antibiotic cement spacer, wheelchair and walker use, prolonged intravenous antibiotics, and a period of months until another implant can be placed. On very rare occasions, the joint cannot be redone. While at the hospital, you are given antibiotics before, during, and after your surgery through your IV to minimize the risk of infection. You will also be encouraged to use antiseptic treatments on your skin before surgery to minimize the risk of infection.

Late infection is also possible, throughout your life, many years after total joint replacement. This is thought to occur by bacteria from a distant site traveling to the implant. Bladder or kidney infections are the most common source of delayed infections, but dental abscesses, infected ingrown toenails, other foot surgery, or bacterial sinus infections can all pose a threat. If these infections occur, they should be treated immediately and our office notified. Also, simple teeth cleaning can cause bacteria from the mouth to get into the blood stream. It is felt that this could pose a threat to the implants and antibiotics should be taken for these procedures for a period of time after joint replacement surgery. The best thing to do is to notify your dentist that you will be having a total joint replacement. If dental surgery, bladder surgery, bowel surgery, rectal surgery, or hemorrhoid surgery is planned after your total joint replacement, the operating physician or dentist should put you on preventative antibiotics.

Dislocations

All hip replacement procedures carry a small risk of dislocation in the post-operative period. Because the anterior approach is less invasive, muscles that support the hip joint are not cut and the prosthetic joint is inherently more stable. Dislocations in Anterior Total Hips are therefore less frequent than conventional approaches.

It is important to understand that in most cases the ball and socket are not locked together in hip replacement surgery. The ball and the socket are held together by muscle tension. Dislocation can occur with injury such as a fall or accident. It can also occur because of inappropriate body positioning. Correct positioning will be shown to you by the therapists and nurses after your surgery. If a dislocation occurs, you will be placed under anesthesia and the hip relocated. You may then need to wear a brace for 6-8 weeks. Occasionally, the hip cannot be relocated without repeat surgery. If multiple dislocations occur, revision of the total hip replacement might be necessary.

Blood Clots

Blood clots can form in the veins of your calf, thigh, or pelvis. Clots can break away and travel to your lungs; this is called a pulmonary embolism. A pulmonary embolism can be life threatening. Care is taken to minimize the risk of blood clots with a blood thinning agent. The main risk of blood thinning agents is excessive thinning of the blood, causing bleeding. Early activity has been shown to be the best way to minimize the risk of blood clots. Some blood thinning agents require daily injections in the hospital and at home, while other agents are taken in pill or tablet form. You or your family will be taught how to give the injections by the nurses in the hospital if needed.

Wear and Implant Failure

The implanted components of a total joint replacement are mechanical pieces and can wear out or break. Only proven technology and materials are used. Obviously, the more active you are, the greater the chance of failure of the implant. With usual daily and recreational activity, however, your total joint replacement should function well for many years.

Bone Fracture

During surgery, your bone can crack with the insertion of the implant. This would be addressed at the time of surgery with screws or wires and should not affect your recovery in most instances.

Blood Loss

Since total joint replacement is a major operation, excessive blood loss can occur which would require blood bank transfusion. Blood transfusion is a possibility, although very unlikely. All appropriate blood loss sparing techniques will be used during your surgery.

Nerve Damage

There are major nerves that cross all major joints. There is a small possibility that one of these nerves can be damaged during surgery or afterwards. If so, this would leave you with weakness or numbness of the lower leg and foot, possibly requiring a permanent brace. Although unlikely, the anterior approach for hip replacement surgery can result in temporary or permanent superficial skin numbness along the front of the thigh.

Leg Length Discrepancy

Equal leg lengths post-operatively are very important. Stability of your total hip replacement is even more important and is the number one priority. Measurements are taken prior to surgery and during surgery so that every attempt is made to maintain equal leg lengths. X-ray is also used intra-operatively to assess leg length. In some cases, however, a leg length difference may be evident post-operatively. Although usually not necessary, in some instances lengthening of the leg is required for implant stability and may require the use of a shoe lift after surgery.

Reaction to Materials

Total joint replacements are made of materials foreign to your body. These materials have been thoroughly tested but a small risk of allergic reaction exists. This risk is not high enough to warrant testing. If you are allergic to metals or jewelry, let a member of the team know. Your surgeon may implant the following materials at his discretion: cobalt-chrome alloy, titanium metal/alloy, polyethylene plastic, stainless steel, hydroxyapatite (synthetic bone crystals), ceramics, bone cement, and bone graft. Some of these materials may not have final approval by the Food and Drug Administration, but are under ongoing investigation. If there is a possibility of bone grafting, this will be discussed with you. Bone grafting is from one of two sources: your body or someone else's. Should the bone graft come from your body, a second incision may be necessary. Bone graft sites hurt for at least three months. Should the bone come from another person, there is a very rare risk of infection from viral or bacterial sources. These infections could include hepatitis and HIV. All bone grafts are thoroughly tested and cultured for all infectious concerns and donors are screened according to rigorous national standards.

Lack of Pain Relief

The total joint replacement is often done for pain relief. However, the procedure may fail to relieve all of your pain.

Anesthesia Complications

There are risks associated with all anesthetic types. These risks will be discussed with you by your anesthesiologist, and will include heart attack and stroke.

Preparation for Surgery

Preparation for Surgery

After it is determined that you are a candidate for surgery, scheduling surgery can be done during an office visit or it can be done over the phone with our surgery scheduling secretary. Our surgery scheduler will provide you with a very important itemized checklist of instructions which include your surgery date, surgery time (this is subject to change), arrival time to the hospital (this is subject to change), a pre-operative appointment with the nurse practitioner or physician assistant, pre-operative internal medicine provider for medical clearance, and information regarding the hip replacement class at the hospital.

The hospital will contact you to help guide you through the process. In addition to this list of instructions, we also ask you to follow the instruction in the **Prior to Admission** section of this book.

There are very specific guidelines in place for pre-operative testing that must be followed and these are time specific. Failure to follow the guidelines could result in postponement or cancelling of your surgery. Our office and the nurse navigator or liaison will help guide you through this process.

Enhanced Recovery Program

Hoag Orthopedic Institute initiated an Enhanced Recovery Program in 2016. Advances in surgical techniques, anesthesia techniques, pre-operative and post-operative management of hydration and nutrition along with patient education have made rapid recovery and early discharge from the hospital possible. Using evidence-based approaches, the ERP has proven to be safe and successful. Our data to date demonstrates that patients recover well at home without an extended hospital stay. Patients also experience a low incidence in adverse events related to the surgery.

Some of our patients qualify for this particular program. This program is for motivated patients in reasonable health who can be discharged to home on the same day as surgery. Our Joint Replacement Team in the office will let you know if you qualify for this program.

Patients who are discharged the same day as their surgery need a dedicated care provider who must attend the ERP class and be available to help you when you are discharged from the hospital.

Patients who participate in this program are instructed to drink a pre-surgery drink the night before surgery AND the day of surgery. More specific details will be provided in the ERP class and written materials provided to you from the class and the office. The fluid helps to avoid dehydration and decreases post-op nausea and vomiting.

Prior to Admission

- See the Internal Medicine Physician listed on your checklist for a history and physical examination. If this is NOT done, your surgery may be cancelled.
- Do not take arthritis medications non-steroidal anti-inflammatory drugs (NSAID's) which include but are not limited to: Advil, Ibuprofen, Motrin, Aleve, Naprosyn, Voltaren, Diclofenac, Lodine, Mobic and Relafen for 7 days before surgery. Stop taking Celebrex 4 days before surgery.
- Stop taking Aspirin or Aspirin products 7 days before surgery unless medically contraindicated. Please discuss this with your surgical team if you have concerns.
- Tylenol or Acetaminophen products can be taken up to the night before surgery.
- If you are on a steroid, such as Prednisone, you should continue to take this until the day of your surgery and please let our office know at your pre-operative appointment.
- Stop taking Coumadin, Plavix, Pradaxa, Xarelto, or other blood thinning medication as directed by your Cardiologist or prescribing medical specialist and notify your surgical team of their recommendations.
- It is important for you to have all pre-operative testing done in a timely manner so that the results can be reviewed by our office, the Internist and the hospital staff. Please have the testing done at the hospital where your surgery is scheduled.
- Practice the exercises listed in this book, the HOI Total Joint Replacement Guide, or as provided in the Pre-op Hip and Knee Orientation class so you will be familiar with them immediately after surgery.
- Exercise as much as you are comfortable with.
- Avoid crash diets and eat a well-balanced diet.
- If you smoke, you need to stop smoking. Your family doctor or internist can help you with this. If you cannot stop smoking permanently, you must abstain for at least 2 weeks before your surgery. If this is not done, your surgery will be cancelled. It is essential not to smoke for at least 2 weeks after surgery. All hospitals are non-smoking areas. Smoking impairs both wound and bone healing and significantly increases the risk of infection and blood clots.
- Your surgical team will inform you about when to stop eating and drinking (including water) before your surgical procedure. Please do not EAT anything after midnight prior to your surgery. Some patients will be instructed to drink fluids the night before their surgery and the morning of surgery. Please clarify the plan with the office on your pre-op appointment.
- Some blood pressure medication(s) will NOT be taken on the morning of surgery. Please clarify your medication instructions at your pre-op appointment.

- Please shower the evening before your surgery. To help prevent infection, foam soap and nasal solution will be provided by the office to use starting five days before your surgery. You will be given a detailed instruction sheet on how to use the products at your preoperative appointment with the Nurse Practitioner or Physician Assistant.
- Wear loose, casual clothing. Do NOT wear makeup or jewelry to surgery.
- Get a good night's rest.
- If you wear dentures, hearing aids, contact lenses or eye glasses, you will be asked to remove them prior to your surgery.
- **Notify your surgeon and the internal medicine physician if there is a change in your medical condition (cold, infection, fever, etc.) or if you have skin lesions or abrasions on your surgical leg prior to surgery. It may be necessary to postpone or reschedule your surgery.**
- Please bring your insurance ID card(s).
- You will need to attend the hip replacement class at the hospital. Please call the number listed on your checklist for an appointment. You can also register online on the hospital website. Go to www.hoagorthopedicinstitute.com and click on For Patients and then Pre-op Orientation Classes or call 855-999-4641 for the regular class and 800-833-4464 for the ERP class.

Preoperative Appointment

Seven to fourteen days prior to surgery you will return to the office for a pre-operative appointment with the Nurse Practitioner or Physician Assistant. This will include the following:

- You will be contacted by a staff member from Hoag Orthopedic Institute who will give you a PATIENT HISTORY QUESTIONNAIRE form including a MEDICATION LIST to complete (either electronically or a hard copy). It is very important that you complete these forms and return them to the hospital. This will allow us to review your past medical history and medications in order to help us manage your care in the hospital.
- Ensuring that your consent from the back of this manual are signed and collected by a team member at your pre-operative appointment with the Nurse Practitioner or Physician Assistant. This form should be completed prior to that appointment.
- A review of the operative risks and review educational materials if requested.
- Confirming and finalizing the type of implants to be used in your surgery.
- Ensuring that appropriate x-rays have been taken to be used for your surgery.
- Discussing plans for discharge from the hospital, which may include transfer to a rehabilitation facility or a skilled nursing facility.
- Answering any last minute questions that you or your family might have.
- Ensuring you have been seen, or will be seen prior to surgery by the Internist listed on your checklist for medical clearance. If we require that you be cleared by a specialist (cardiologist, hematologist, pulmonologist, nephrologist, etc.) this will need to be done prior to your pre-operative visit with our office. This will also be included on your checklist and a special clearance will have to be written by that physician and provided to our office. If the special clearance is not done, your surgery may be cancelled or postponed. This insures that your medical condition is optimized prior to surgery.
- Your lab work, chest x-ray and EKG should be done 14-28 days prior to surgery so the results can be reviewed at this appointment and reviewed by the Internist.
- Methicillin-resistant Staphylococcus Aureus (MRSA) nasal swab testing must be done within 28 days prior to surgery. The hospital will contact you regarding this.
- Please let the Nurse Practitioner or Physician Assistant know if you have any open cuts, sores, abrasions, lacerations, or open wounds on your body prior to surgery. This could greatly increase the risk of infection.

Nurse Navigator

Nurse Navigator or Patient Liaison

An integral part of the Total Joint Team is the nurse navigator who works at the hospital. This person is an advocate on your behalf and will be available to offer support and assistance to both you and your family as you go through this entire process. Working with your surgeon and the entire Total Joint Team, the nurse navigator is committed to meeting your hospital expectations and the standard of care during your hospital admission and, if necessary, your rehabilitation stay.

If you have individual questions, or specific concerns of which we should be aware, please call the nurse navigator prior to your surgery, and at any time after. By allowing the nurse navigator to become involved, you will be able to focus on achieving the very best outcome of you total joint replacement.

The hospital staff from Hoag Orthopaedic Institute will contact you approximately 4-6 weeks prior to surgery. They will arrange for you to come to the hospital to complete your pre-operative testing and assist you through the pre-operative process.

The Nurse Navigator from Hoag Orthopaedic Institute can be contacted at:
949-727-5010 option 3

Prehab Exercises

Pre-Surgical Hip Exercises

- *Start performing these exercises beginning today and continue until the day of your surgery*
- *Perform each exercise 10 times, twice per day. Practice with both legs.*
- *Also, walk as much as is comfortable.*

Gentle exercises help strengthen the muscles around your hip. Practice the following exercises before your surgery to give yourself the advantage of the strongest leg muscles possible. These exercises will be reviewed with you by your physical therapist after your surgery. You will be doing some of these exercises every one to two hours on your own while in the hospital. Do not hold your breath while doing the exercises.

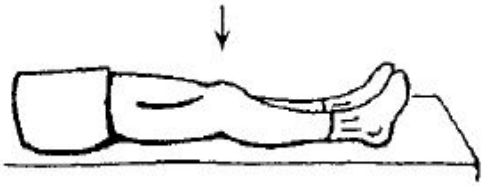
---

1. Ankle Pumps

This exercise is done frequently during the day to promote good circulation and to assist in the prevention of blood clots. This is a simple exercise in which you pump your ankles up slowly and down slowly with many repetitions.

---

2. Quad Sets (thigh tighteners)



This exercise strengthens the quadriceps muscle on the front of your thigh. These muscles give your knee stability and keep your knees from buckling while you are walking. This exercise is done by tightening your thigh until the back of the knee is flat on the bed, and holding this straight leg position for the count of five seconds.

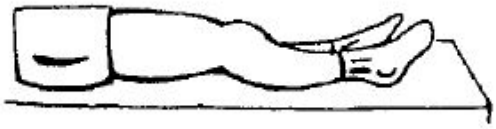
---

3. Hamstring Sets (back of thigh tighteners)

This exercise will strengthen the muscles located on the back of your thigh. This is done by bending the knee very slightly and pushing down with the heel into your bed, again holding for the count of five seconds.

4. Gluteal Sets (buttocks pinches)

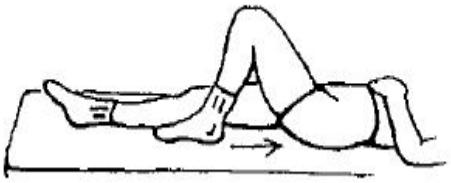
This exercise strengthens the gluteus maximus which is a very important muscle for walking. This is done by pinching your buttocks together and holding contraction for the count of five seconds.



---

5. Heel Slides

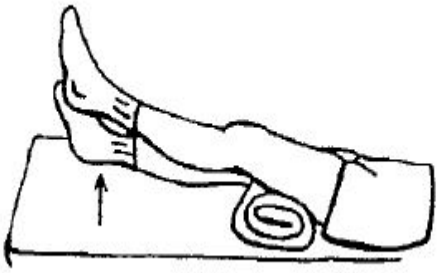
This exercise will help your hip motin and strength while alleviating a lot of thigh tightness you may experience. This is done by sliding the heel of your operated leg up toward your buttock until your ankle is directly beside your other knee. Slowly lower it back down to the extended position.



---

6. Short Arc Quads

This exercise strengthens the quadricep muscle on the front of your thigh. Place a big towel or bolster under the knee of your operated leg, then keep your knee on the bolster while raising your foot up to the ceiling until your operated leg is completely straight. Slowly return your foot back down to the starting position.



Pre-surgical Upper Body Strengthening Exercises

- *Strong arms make it easier to use your walker/cane and get in and out of bed after surgery.*
- *Do 10 of each exercise at least twice daily up until day of surgery.*
- *If you do not have weights available, soup cans or bottles of water provide resistance*

---

1. Chair Push Ups

When seated in a sturdy chair, place hands on arm rest. Push down with arms to lift buttocks off the chair and straighten your elbows. You should feel the muscles behind your arms tighten. Perform slowly.

---

2. Tricep Extensions

Hold arm with weight over your head. Support with other hand. Slowly bend elbow behind head. Straighten.

---

3. Arm Press

Start with hand on either side of head. Straighten arms slowly so weights are lifted staight towards ceiling.

---

4. Shoulder Flexion

Start with arms straight in front of you with thumb side of hand up. Keep arms straight and lift up over head as high as tolerated.

Preparing Your Home for After Surgery

Now is the time to prepare your home for your return from the hospital. It is recommended that you have 24 hour assistance for at least the first 3-5 days after surgery. You will need assistance for longer with cooking, housework, and general activities. If your family and friends are unable to help you, the Case Management Department at the hospital is able to provide a list of agencies for referrals.

It is important that your house be free from hazards that could cause you to fall or lose your balance as a fall can greatly set back your recovery. Use the following checklist to assure that your home is safe for you.

Be aware of uneven surfaces inside and outside of your home.

Remove scatter rugs and secure extension cords out of the way.

Have a cordless phone or cell phone that can be kept on your person.

Provide a place for your pets to be kept while you are walking around the house.

Maintain adequate lighting in all areas. Use night-lights in bathroom and hallways.

Safety rails and/or a shower chair may be helpful in the tub/shower.

Tubs and showers must have non-skid surfaces or mats.

Use a raised toilet seat or 3-in-1 commode, if needed

Select footwear that stays securely on your feet and has non-skid soles.

Use firm chairs with arm rests or place a firm cushion or pillow in seat of chair. It is easiest to stand from a seat that is higher than the back of your knees.

If your bed is particularly low or high, explore options to make this easier to get in and out of.

Move frequently used items to shelves and counters that are easy to reach.

Prepare simple meals ahead and store in small, sealed containers for heating later.

Consider water bottles to avoid spills that could be a fall hazard.

Be sure there is room to negotiate a walker at home in case one is needed after surgery.

Hospital Stay

Day of Admission

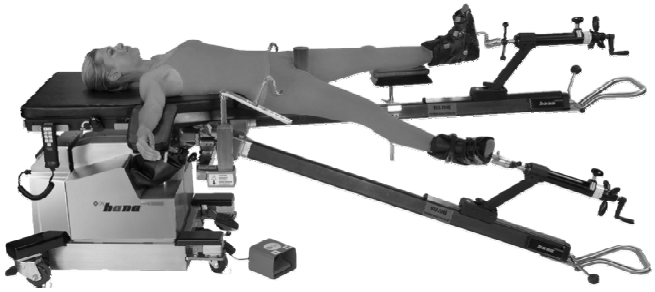
The anesthesiologist should be calling you the night before your surgery to discuss your medical condition(s) and the types of anesthesia available to you. They will discuss with you the different types of anesthesia along with the risks and benefits of each. You will meet him or her prior to your surgery upon admission to the Pre-op Surgical Unit.

On the day of admission, you will report to the main lobby on the first floor of the hospital. After checking in at the admitting desk you will be shown to the Pre-op Unit. Here, the nurses will make you comfortable, perform a brief history and physical examination, start an IV, administer medications, and answer any questions. Your anesthesiologist will meet you at this time for a discussion of the types of anesthesia. Please feel free to ask your anesthesiologist about all the available methods of anesthesia. For most patients, the Joint Replacement Team recommends use of a spinal anesthetic for reasons stated below. This is not always possible in every patient and both you and your anesthesiologist will decide which is best prior to surgery.

You will be given IV antibiotics and you will sign a surgical consent form. Your surgeon will see you in the Pre-op Unit area to mark the correct surgical site and side prior to any sedation medication administration. You will also meet an OR registered nurse in the Pre-op Unit and you will be transported to the operating room when the OR is ready.

Surgery

Once you are in the surgery area, you will be asked to move from the gurney to the operating table. This is a special table called the Hana Table and it works extremely well for the direct anterior hip approach, but it is not the most comfortable piece of furniture you have ever been on!



Hana Table

You will notice a flurry of activity around you. While the anesthesiologist hangs IVs, places monitors on you, and prepares for the type of anesthetic you will receive, the nurses will be preparing the room for surgery. A great deal of equipment needs to be prepared for each procedure.

A spinal (regional) anesthetic or a general anesthetic will be used for your surgery. If you are not a candidate for a spinal anesthetic then a general anesthetic will be used. This will be decided between you and the anesthesiologist. A spinal anesthetic numbs you from the waist down so you will not feel pain. Once the spinal is working well, you will be sedated with medications through the IV so you are not aware of the actual surgery. The spinal does require a needle stick; however, the area will be numbed with local anesthetic prior to the needle stick. There are benefits of a spinal anesthetic. There is less risk of stroke or heart attack during surgery than with a general anesthetic. There is also less risk of blood clots forming at the time of surgery and less surgical blood loss during the procedure.

There are risks and benefits of all types of anesthesia. These will be discussed with you by the anesthesiologist. After the anesthesiologist has talked to you, an anesthetic consent form has to be signed by you prior to surgery in the PRE-OP Unit.

When the surgery is completed, you will be transported to the Post Anesthesia Care Unit (PACU) or Recovery Room.

Recovery Room

In the Recovery Room, also known as the Post Anesthetic Care Unit (PACU), you will be closely monitored by highly trained intensive care nurses. Your surgeon will notify your family of your condition and how your surgery went. Your pain should be under control; if it is not, bring this to the attention of your nurse. X-rays will be taken as necessary. If you have a drain, the blood output will be followed closely. Most likely, you will be breathing additional oxygen through a mask or nasal tube. You will be in the PACU for approximately 1-2 hours. Many patients require a longer stay but this is not necessarily a reason for concern. No visitors are allowed in the PACU such that the nurses can provide the best and safest environment for all patients recovering from surgery.

When you are medically stable, you will be transported to the Orthopaedic Nursing Floor.

If you are participating in the ERP program you will be transported to a designated area of the hospital to recover. Once transported to this location your "buddy" can be with you. A physical therapist will meet with you to get you up and ambulating. Once you are safe to go home you will be discharged from the hospital.

Nursing Floor

Once on the nursing floor, you will be cared for by experienced orthopedic registered nurses, nurse's aides, physical therapists, and physical therapy aides. A team approach to total joint patients has been established and is headed by your surgeon, the Nurse Practitioner, Physician Assistant, and the case managers. Your care will follow a protocol designed to maximize your recovery.

Patients who have a direct anterior approach generally stay 0-1 night in the hospital depending on several factors, but, in some instances, may go home from the hospital on the same day of the surgical procedure if they qualify for the enhanced recovery program. This is a very busy time for you and your family. There are a lot of physical therapy and nursing instructions that have to be given in a very short amount of time. Written instructions will be provided to you prior to your discharge home.

If you are discharged home, you should be:

- Independent in a home exercise program.
- Independent with ambulation with the correct use of a walker, crutches, or a cane.
- Able to get in and out of bed independently.
- Independent in bathing and dressing.
- Able to get your own food prepared as necessary for your living situation.
- Climbing and descending stairs safely and correctly if necessary.
- Following weight bearing precautions as ordered by your surgeon.
- Getting in and out of a car correctly and safely.
- Able to identify medications, name the side effects, and know when to take them.
- You or a family member is able to take care of your incision and dressing after surgery.
- Given necessary home equipment and be able to use it effectively.
- Given a follow up appointment with your surgeon (this is usually done on the pre-operative appointment in the office).
- Given the contact information for the home health agency and physical therapists.

If you have a long car ride home, stop every 45-60 minutes and get out of the car to do some walking to prevent blood clots from forming. Also, do ankle pumps in the car while riding home.

If you live alone, it is highly recommended to have a family member or a friend stay with you for 5-7 days after discharge from the hospital instead of going to a Rehab facility.

Insurance companies and Medicare WILL NOT pay for you to have a care provider stay with you at home if you live alone. This is your responsibility as a patient to ensure that you have made the proper arrangements for home. You can get a list of care providers from your surgeon's office or your nurse navigator at HOI.

Rehabilitation Facility
Or
Skilled Nursing Facility
(SNF)

Inpatient Rehabilitation

Transfer to an Inpatient Rehabilitation or Skilled Nursing Unit (SNF's) after your acute care hospital stay will be done ONLY for those patients needing additional closely monitored therapy and care. **Our preference is for you to go directly home from the hospital if feasible as complication rates and hospital re-admissions for adverse events related to joint replacement surgery are higher for patients that require care in an inpatient rehabilitation, extended care, or nursing home facility after their surgical procedure.** Therapy is a continuation of what you have read in this manual and learned in the hospital. Whether or not you will be transferred to an SNF depends on two factors: 1) Questions asked before admission about your general health, help at home, and activity level before surgery; and 2) How you progress in the hospital after your surgery. Transfer to an SNF is done only for those patients who exhibit a need for it and it is felt to be a very positive step. For patients who live alone, this is NOT a reason for going to an SNF. Insurance companies have very specific criteria for patients needing extended inpatient rehabilitation and living alone does not qualify.

If you have PPO insurance or an HMO plan, you will need to know what facilities are contracted with your insurance carrier. Every effort is made to transfer to a contracted facility. We have case managers in the hospital to help make these arrangements.

The SNF facility is a place where people go for additional therapies for 7-10 days. Patients with many different medical conditions are located in SNF's. The SNF facility is also not a hospital, but a care center where the focus is on independence. This means that although there are nurses 24 hours per day, the nurse to patient ratio is different than in the hospital.

To be admitted to an SNF facility, you must be able to participate in three hours of therapy per day, five days per week. You will receive less therapy on the weekends. The three hours are split between Physical Therapy and Occupational Therapy.

Therapies are done on an individual and group basis. The average length of stay is one week. This stay is covered by Medicare and most major insurance groups. Prior to admission, insurance coverage will be verified by the Health Benefits Advisor from the SNF facility.

You will be getting dressed daily, so please bring several changes of clothes that you normally wear at home. Some exercises are done in a therapy gym, so slacks or sweats are helpful. Meals are served in a central dining room. You will be encouraged to bathe, dress, and perform daily hygiene independently with the assistance of your therapists.

While in the SNF facility, you will be followed by a team of health care people: a medical physician (who may or may not be your family doctor), a rehabilitation physician who is the leader of the team, Rehab nurses, Rehab therapists, a social worker, and a discharge planner. The goal of this team is to safely return you to your pre-surgery living situation. This implied a comfort level with activities of daily living. Your mobility skills are practiced and increased daily so that when you go home, you will be able to take care of yourself.

Physical/Occupational Therapy

Physical/Occupational Therapy

All therapists you come in contact with should be familiar with the following protocol. You should also be familiar with the protocol they provide for you.

The physical therapist works mostly on exercises and walking. They will begin to work with you on the day of your surgery. Your therapist will teach you all necessary precautions to allow proper healing and functioning of your new joint. They will get you up and walking with a walker or crutches after your surgery. They work with you 2 times a day in the hospital. You will be taught exercises, transfer techniques (for getting in and out of bed), walking with a walker or crutches, stair climbing, and activities of daily living (i.e.: dressing and bathing). You may need special equipment at home to help you with a safer and easier recovery. If equipment is needed, it will be ordered for you by the hospital discharge planner or case manager and may include a front wheel walker or crutches. Some patients also benefit from a detachable shower head and grab bar in the shower, both of which should be installed by you before surgery. Please purchase a cane to use after you are done with the walker or crutches.

The physical therapist will instruct you on how much weight you put on your leg when you get up. The majority of patients can be full weight bearing right away after your surgery. Your weight bearing status is determined by your surgeon during the time of surgery and is to remain in place for 6 weeks. The occupational therapist works on activities of daily living assistance. This will be done on an individual basis depending on your needs and safety.

You will receive some home health physical therapy for 1-2 weeks after you are discharged home from the hospital. Our case managers in the hospital will set this up for you. Physical therapy does not visit every day to your home to help take care of you. They visit 2-3 times a week and will instruct you on exercises to be done on your own. Most patients are able to ambulate outside with or without a cane on their own at this point. You can gradually increase your walking distances depending on your progress. Continue your strengthening exercises and stretching as instructed by the home health physical therapist.

Post-operative Follow-up

Post-operative Return Visits to the Office

After you have gone home, we will ask you to return to the office only at routine times, assuming all is going well.

You will not have staples to take out for the direct anterior approach. You will have sutures underneath the skin that will dissolve over time. There will be an occlusive dressing covering your incision that will stay in place for one week. You can peel the occlusive dressing off one week after surgery and leave the incision open to air. Most patients may have a protective sealant or mesh over the incision that will gradually wear off and/or fall off. You will be given a discharge instruction sheet from the hospital to instruct you on how to care for your incision.

At 6 weeks post-operative all patients are seen for an incision check, examination, assessment of your progress, and x-rays. You will also be given a 6 week instruction form in our office. New exercises can be started. A prescription for outpatient physical therapy with our protocol will be provided if you need formal physical therapy. Most patients will not need formal physical therapy. Sexual intercourse can be resumed at this time.

Further follow up appointments occur depending on your progress. Usually you are seen at 3 months or 6 months and again at 12 months after surgery, and then every other year after that. These visits will include x-rays. X-rays are a vital part of the follow up visit because they can sometimes show problems long before you feel that anything is wrong. Follow up visits are also important for us to continue to define the best treatment for total joint patients. So, even if you are doing well, we feel it is necessary for you to return to the office as scheduled. However, if you are having problems, you can be seen sooner than your scheduled visit.

The surgeon will be in charge of follow up visits. You will be seen by other staff members who assist in total joint research. They will continue to monitor our treatments and your performance. We feel strongly that only through research and feedback can we improve your care.

We also ask that you see your regular Internal Medicine Physician of Primary Care physician within 2 months from the date of your discharge from the hospital. This visit will ensure that you are as physically fit as possible and assist in maximizing your recovery.

The post-operative follow up schedule as outlined is for patients progressing without problems. Should you have the need for more frequent visits, you may be asked to return at shorter intervals. Should you desire to schedule a visit for any reason, you are always welcome.

Pain

A Word About Pain

Even the events leading up to your surgery can be painful. There will be several needle sticks for blood and to start an IV. Should you undergo a spinal anesthetic, there will be a needle stick in your back. The area around this will be numbed to a certain extent with local anesthetic. Once the anesthetic is given, you should experience no pain. You may experience some sensation of leg movement under spinal anesthetic, but again, this should not be painful. Anterior total hip patients are on their backs during surgery. You will be sleeping during your surgery. The OR staff and anesthesiologist will make sure you are as comfortable as possible before you fall asleep.

A total joint replacement is major surgery; however, there is less post-operative pain associated with the direct anterior approach compared to more traditional approaches. Please know that it is the primary goal of the team to keep you from being in severe pain. Pain is very subjective and different for every patient. Many patients have minimal to no pain. Some patients have moderate pain. Should you experience severe pain, notify your nurse right away. Pain medication is always ordered and we encourage you to take it when needed after your surgery.

The surgical site is injected with local anesthetic at the end of surgery. The nurses will start you on oral pain medications right away. Many patients say that the pain of surgery was much less than their everyday pain before surgery! Please feel free to discuss pain issues with any member of the Total Join Team.

Pain after hip replacement surgery is not uncommon for several weeks during your initial recovery. Some therapy and exercises will cause mild to moderate pain for some periods of time. If the pain persists, question the therapy or stop it. Hopefully, all of the pain you experience will be minimal.

Narcotics are strongly discouraged before hip replacement surgery. It makes it very difficult to manage post-operative pain after surgery. Pain medications such as narcotics and anti-inflammatories (NSAIDS) can help with your recovery after hip replacement surgery. You will be provided with prescriptions for narcotics, a muscle relaxer, and an anti-inflammatory at your pre-operative appointment. We do encourage their usage when needed in the immediate post-operative period. Usually, patients have discontinued narcotic usage by 2-4 weeks after anterior approach hip replacement surgery.

Problems to Watch for After Surgery

Some Other Problems to Watch for After Surgery

Should the incision become red or angry looking, please call us. If you notice an increase in any type of drainage through the incision site or drain site, please call us. Should the area around the incision become more swollen and not respond to rest and elevation (elevation defined as your foot above the level of your heart), please call us. If you have a body fever that is not getting better, please call us. A good rule of thumb is, **when in doubt, call.**

Blood clots can form in your calf or thigh. Should you notice leg, ankle, or foot swelling that does not respond to rest and elevation (elevation defined as your foot above the level of your heart), please call us. There is usually tenderness of the calf or inner thigh along with swelling. Redness in these areas is also sometimes seen. Many people develop blood clots without any sign of a problem so, **when in doubt, call.**

If you are having chest pain and/or shortness of breath, it is best to call 911 and go to the nearest hospital.

It is normal to have swelling and tenderness of the hip after surgery. Generally, this gets better gradually over time. You may wear tight compressive bicycle shorts to help the swelling resolve. It often takes weeks and even months for this to fully resolve. You can start to sleep on the operative hip side at 6 weeks after surgery if comfortable.

Blood Loss and Transfusion

Blood Loss and Transfusions

Blood Donation and Transfusion(s)

It is highly unlikely you will require a blood transfusion during or after your hip replacement surgery. Over the past several years, national guidelines have changed with respect to the use of blood products during surgical care. Blood transfusions are now only routinely used on an emergent or urgent basis or for severe symptoms of anemia. We no longer recommend that you donate your own blood before surgery. If you have questions or concerns, please be sure to discuss them with your healthcare providers.

Cost and Insurance

A Word About Cost and Insurance

Total joint replacements are very costly procedures. The hospital will generate the largest bill. There are also bills for the assistant during surgery, anesthesiologist, home health care, and possibly outpatient physical therapy. It is very important for patients to know their insurance policy and the coverage that they have. Our surgery schedulers will obtain the proper authorizations for surgery and the hospital stay. They can also refer you to the proper sources at the hospital to answer your questions regarding coverage.

For the surgeon who has opted out of Medicare, our billing office can answer your questions on an individualized basis.

Word of Encouragement

Conclusion

The entire Total Joint Team is committed to the successful outcome of your surgery. We feel that our system works very well. Your surgery and recovery should proceed without problem. We have prepared this manual and organized our team so that you, the patient, are an active participant. We ask that you maintain a positive mental outlook throughout the entire process. Studies have shown that optimistic patients do better.

Thank you for reading this manual.

Frequently Asked Questions

General Questions

Q: Why does my hip click?

A: Your hip replacement is made from metal, plastic, and possibly ceramic. The click you hear or feel are the bearing surfaces contacting each other during activity. Your normal joint surfaces (pre-surgery) usually separate and re-contact in normal activity. However, the normal joint surface is covered with a soft substance called cartilage that does not make any perceivable noise. It is normal to hear or feel this clicking sensation, especially early after your surgery.

Q: How long should I take pain medication?

A: Pain medication and pain control is an integral part of your recovery from surgery. You should use the pain medication prescribed by your doctor until you are able to function well without it. The duration of pain medication usage can vary widely between individuals after surgery, but in general, most people are able to decrease the use of pain medication over the first few weeks and rarely require narcotic medication longer than 1 month after surgery. Narcotic medications can be addicting. Therefore, your surgeon would like you to utilize non-narcotic pain medications (Tylenol or NSAID's) when appropriate. It is our office policy that narcotic pain medication will only be given up to 3 months post-operative. If you still require narcotic pain medication beyond 3 months post-operative, a pain management specialist will be recommended.

Q: Do I need to take antibiotics when I have a dental or other medical procedure?

A: Yes. We recommend taking an antibiotic prior to any dental procedure for the first 2 years after your joint replacement surgery for most patients. In certain instances they need to be continued for a lifetime. If dental work is being done for an infection, antibiotic prophylaxis is necessary. Avoid any dental cleaning or other non-urgent procedures for 3 months following joint replacement surgery.

Q: Is it normal to feel depressed?

A: It is not uncommon to have feelings of depression after joint replacement surgery. This may be due to a variety of factors, such as limited mobility, discomfort, increased dependency on others, and medication side effects. Feelings of depression will typically fade as you begin to return to regular activities. If your feelings of depression persist, consult your primary care physician.

Q: When can I drive?

A: If you had surgery on your right hip, you should not drive for at least 2 weeks. After this time, you may return to driving as soon as you feel comfortable and safe to do so. If you had surgery on your left hip, you may return to driving automatic transmission vehicles as soon as 1 week, if you feel comfortable and safe to do so. Do not drive if you are taking narcotics.

Q: When can I get my incision wet?

A: You may shower immediately if occlusive (waterproof) dressing is used over your incision. If you do not have an occlusive dressing in place, you will need to use Saran Wrap or a plastic bag with tape to keep your dressings and incision dry when showering. It is best to then change your dressing after the shower. Do not submerge or soak your wound until you are seen in the office for your six week follow up visit.

Q: Can I use cream on my incision?

A: It is important to keep your incision dry for the first week. As the incision heals, and the small scabs resolve, usually 3-4 weeks after surgery, cream or lotion may be applied to the incision. Most commonly used creams include Vitamin E, cocoa butter, Preparation H, silicone gel or sheets, and Mederma. There is not a lot of scientific evidence to show that this makes a significant difference in the healing of your incision; however, the moisturizers alone may help avoid chafing and cracking and make range of motion exercises easier to perform.

Q: What are the signs and symptoms of infection?

A: Infection is a very serious complication after total joint replacement. As such, it is important to be aware of the signs and symptoms of infection. Patients may experience persistent fever (>102°), chills or night sweats. In addition, it is important to closely monitor your incision. Be aware of any redness and drainage from your surgical incision. If these develop, let your surgeon know immediately.

Q: How long do I need walking aids such as crutches, a walker or cane?

A: The time that you may need a walking aid after total joint replacement is variable. In general, if your surgeon allows you to place as much weight as tolerated on your total joint replacement, most patients use a walker for approximately 1-2 weeks (direct anterior approach) or 3-4 weeks (posterior approach) and then a cane for another 2-4 weeks. You should use a walking aid until you feel comfortable and safe walking without one. Your physical therapist will help guide you through this transition.

Q: When can I travel long distances in a car or plane?

A: You can travel when you feel comfortable. This is generally between 4-6 weeks after surgery. However, when travelling, it is important to take some measures to prevent blood clots. Blood clots in the lung, also known as pulmonary embolisms, present the greatest concern with travel. It is recommended that you get up to walk and stretch at least once every one to two hours during extended travel. Speak directly with your surgeon regarding their specific recommendations for you.

Q: How long will I experience pain?

A: How long you will experience pain after total joint replacement is variable. Your pain should gradually diminish over time after surgery. You may require narcotic pain medicine for the first 4-6 weeks after surgery. In general, you should then be able to switch to over the counter pain medicines such as an anti-inflammatory or Tylenol. Minor discomfort related to a replaced joint may on occasion linger for 6-12 months.

Q: What can I use on my incision to minimize scarring?

A: Many patients have found scar creams helpful in reducing scarring. Creams with high Vitamin E content are most effective. For raised scars you can consider Mederma or Preparation H, which are available over the counter.

Q: When will my incision line become less red?

A: All incisions fade at different rates. This varies according to your own skin tone. It is advisable to keep the incision out of direct sunlight as this will prolong the process. Most incisions fade by 6-12 months.

Q: When will the swelling go down?

A: Swelling around the incision area varies post-operatively from patient to patient. For most patients, this area will stay perceptively swollen for 3-6 months after surgery. Don't worry. This will subside with time. However, if the swelling of the entire leg occurs that does not go down with elevation (foot above the level of your heart) or after resting overnight, this may be a sign of a blood clot. Contact your surgeon's office immediately if this should occur.

Q: When can I go back to work?

A: This depends on your profession. Typically if your work is sedentary you may return when comfortable. If your work is more rigorous you may require up to 3 months before you can return to full duty. In some cases more or less time is necessary.

Q: How long do I need to go to therapy?

A: Patients will receive in hospital physical therapy prior to being discharged home. Most patients will also receive 1-2 weeks of in home physical therapy upon discharge home. Most patients do not require any outpatient physical therapy following total hip replacement surgery performed via the anterior approach. At the 6 week postoperative appointment, your progress will be evaluated and if your physician feels you need outpatient therapy, it will be determined and initiated at that visit.

Q: Will I set off the security monitors at the airport? Do I need a letter from my surgeon?

A: Yes, you will probably set off the alarms as you progress through the security checkpoint. Be proactive and inform security personnel that you have had a joint replacement and will most likely set off the alarm. Wear clothing that will allow you to show them your incision without difficulty. We no longer provide a letter or wallet card identifying you have had a joint replacement as security will no longer accept these as proof of such.

Q: How long will I be on a blood thinner?

A: Various options including pills and injections are available to thin your blood and help prevent phlebitis and blood clots. Your surgeon will choose a therapy based on your medical history and possibly on tests done before you leave the hospital. Usually after a hip replacement you are on a blood thinner for approximately 4 to 6 weeks.

Q: Should I apply ice or heat?

A: Initially, ice is most helpful to keep down swelling and diminish pain. Heat should be avoided for 6 weeks following surgery.

Q: When can I have a pedicure?

A: Much like dental or other invasive medical procedures during most pedicures the are small cuts in the skin that can introduce bacteria. Please avoid any pedicures for at least 6 weeks but preferably 3 months after surgery.

Hip Specific Questions

Q: Can I lay on my hip incision?

A: Yes, it is safe to lay on your hip incision once it is healed. The incision may be sensitive for the first few months after surgery. A pillow or towel under your hip can help cushion the incision and decrease the discomfort.

Q: I think my leg feels longer now. Is this possible?

A: In the majority of cases, your leg length will essentially be unchanged. With hip surgery, this feeling usually comes from stretching of contracted muscles about the hip or a chronic tilt to the pelvis which can create a perceived discrepancy in leg length. With time, these muscles stretch out, the pelvis levels out, and the feeling of leg length difference usually disappears.

Q: Are there any unsafe positions for sex?

A: Total Hip Precautions need to be observed postoperatively during all your daily activities, including sexual intercourse. The majority of patients can safely resume sexual intercourse one or two months after surgery, adhering to the following guidelines:

- Resume sexual intercourse initially with you on your back (supine)
- Initially you should assume a more passive role
- Avoid extremes of motion
- ALWAYS FOLLOW YOUR HIP PRECAUTIONS
- If you still have questions, ask your surgeon, nurse practitioner, physician assistant, or physical therapist.

Patient Education Articles

Setting Expectations with Your Surgeon Prior to Joint Replacement

Total hip and total knee replacements have improved the quality of life for millions of people worldwide by relieving pain and restoring function and motion caused by arthritis and other joint conditions. People with successful joint replacements are able to stand, walk, rest and participate in recreational activities with little pain. While some people would be satisfied if they achieve these basic goals, others will expect to do more like participating in physically demanding sports and hobbies.

If you are considering joint replacement surgery, you should have an **open, honest discussion with your surgeon about setting expectations** for pain relief and function after surgery. You can learn about what to expect from the early recovery phase through the final result.

Based on your unique medical history and your physical and mental condition prior to surgery, your surgeon will also have expectations about your level of function after surgery. Setting high expectations that are unrealistic can lead to dissatisfaction with the final result. Setting expectations too low may not allow you to achieve the best possible function and result after surgery. **Your expectations and your surgeon's expectations should be aligned so that you can achieve the highest level of satisfaction with your procedure.**

Surgeons aim to guide expectations for recovery through discussions with their patients so that there is agreement on the goals of surgery. In one of our studies, we observed that recovery expectations were not aligned in at least 50% of patients undergoing elective joint replacement surgery. The take home message is that it is paramount to discuss the expectations for pain relief and function with your surgeon **before** undergoing a total joint replacement to make sure you're both on the same page.

References: Ghomrawi HMK, Franco Ferrando N, Mandl L, Do H, Noor N, Gonzalez Della Valle A. How often are patient

Getting a Good Night's Sleep after Hip or Knee Replacement Surgery

One of the most common complaints after total joint replacement is difficulty sleeping. **The most common cause of sleep disruption is pain.** It has been reported that more than half of patients wake up with pain after joint replacement. Many factors can affect the quality of sleep after a major surgery including anesthesia-type, narcotic use and discomfort due to pain or restricted leg movements. As sleep is crucial to the recovery process, it is important to follow appropriate pain management protocols.

Contemporary pain management protocols are designed to be multifaceted and inhibit pain in a multitude of ways. Many protocols use a variety of injections and nerve blocks for localized pain, as well as employing narcotics and anti-inflammatory medication for several weeks after surgery. As such, pain protocols should be fully followed to ensure an adequate recovery.

Usually around the second or third week after surgery, you will start to **increase your activity levels** while at the same time **decrease your narcotic use**. This often coincides with having a difficult time sleeping. When this occurs, you should take your pain medication an hour before bed to achieve better comfort and help restore your sleep cycle. A few days off from strenuous activity or physical therapy will not inhibit your recovery, but can have a tremendous effect on your ability to fall asleep and stay asleep.

Overall, sleep deprivation after total joint replacement is manageable through pain management, the occasional use of sleeping pills, and activity modification. If all else fails, it is advisable to **call your surgeon** who can help you manage sleep disturbances during the postoperative period.

References:

Rosenberg-Adamsen S, Kehlet H, Dodds C, Rosenberg J. Postoperative sleep disturbance: mechanisms and clinical implications. *Br J Anaesth*.1996;76:552-559. Wylde V, Rooker J, Halliday L, et al. Acute postoperative pain at rest after hip and knee

arthroplasty: severity, sensory qualities and impact on sleep. *Orthopaedics & Traumatology: Surgery & Research*. 2011;7:139-44.

Myoji Y, Fujita K, Mawatari M et al. Changes in sleep-wake rhythms, subjective sleep quality and pain among patients undergoing total hip arthroplasty. *Int J Nurs Pract.* 2014 Apr 30. doi: 10.1111/ijn.12345. [Epub ahead of print]

Krenk L, Jennum P, Kehlet H. Sleep disturbances after fast-track hip and knee arthroplasty. *Brit Journ of Anesthesia*. 2012; 109:769-75.

This article has been written and peer reviewed by the AAHKS Patient and Public Relations Committee and the AAHKS Evidence Based Medicine Committee.

Preventing Infection in Your Joint at the Dentist's Office

Developing an infection in and around a total hip or knee replacement is one of the most catastrophic complications that can occur. During a dental procedure, it is possible for bacteria from the mouth, teeth or gums to travel through the bloodstream and settle in an artificial joint. The use of an oral antibiotic 1 hour prior to dental work has been thought to lower this risk. Orthopedic surgeons have historically recommended the routine use of antibiotics prior to dental work due to the catastrophic effects of a prosthetic joint infection and the relative safety of a single dose of oral antibiotics.

In 2013, The American Academy of Orthopaedic Surgeons and The American Dental Association worked together to create guidelines for this situation. The workgroup reviewed the available published data to try and synthesize recommendations for patients and practitioners. Unfortunately, there is not a large amount of quality data, but they issued three findings:

1. The practitioner might consider discontinuing the practice of routinely prescribing prophylactic antibiotics for patients with hip and knee prosthetic joint implants undergoing dental procedures.
2. We are unable to recommend for or against the use of topical oral antimicrobials in patients with prosthetic joint implants or other orthopaedic implants undergoing dental procedures.
3. In the absence of reliable evidence linking poor oral health to prosthetic joint infection, it is the opinion of the work group that patients with prosthetic joint implants or other orthopaedic implants maintain appropriate oral hygiene.

Many factors should be considered when you are making this decision, such as the **type of procedure** being performed (routine cleaning vs. more invasive work), the presence or absence of an **active infection in the mouth**, your **tolerance of antibiotics**, and the **recommendations** of your surgeon and dentist.

With the lack of a definitive answer on this question, **we recommend that you discuss this with your surgeon**.

If your surgeon or dentist recommends antibiotics, the following antibiotics are usually used:

- If you are **NOT allergic** to Penicillin: 2 grams of Amoxicillin, Cephalexin, or Cephradine taken one hour prior to the procedure.
- If you **ARE allergic** to Penicillin: 600mg of Clindamycin taken orally or administered by injection one hour prior to the procedure.

References:

1. Watters, W III, Rethman, MP, Hanson, NB, et al: AAOS-ADA Clinical Practice Guideline Summary: Prevention of Orthopaedic Implant Infection in Patients Undergoing Dental Procedures. *Journal of the American Academy of Orthopedic Surgeons*. March 2013; 21:180-189.; doi:10.5435/JAAOS-21-03-180

This article has been written and peer reviewed by the AAHKS Patient and Public Relations Committee and the AAHKS Evidence Based Medicine Committee.

Will My Artificial Joint Set Off Airport Security Metal Detectors?

Belt buckles, key chains and smartphones may set off sensitive metal detectors at airport security checkpoints. Many commonly used orthopaedic implants may also set off the metal detectors. Over 90% of implanted **total hip arthroplasty (THA)** and **total knee arthroplasty (TKA)** devices will set off airport metal detectors. Many THA and TKA implants now include ceramic and plastic materials in addition to metal, and the metal will still likely cause an alarm. **A card from your physician is no longer accepted for identification of these types of implants.**

If you or a family member has a metal implant, he or she should inform a Transportation Security Officer before screening begins. Passengers can use TSA's Notification Card to communicate discreetly with security officers; however, showing this card or other medical documentation **will not exempt a passenger** from additional screening.

Many patients now prefer to be screened by imaging technology (X-ray Machine) to reduce the likelihood of a pat-down being necessary. If a pat-down is selected by the TSA, it will be helpful to wear clothes that allow you to easily reveal your surgical scar.

The TSA offers more information on metal implants and the TSA Notification Card on their website.

This article has been written and peer reviewed by the AAHKS Patient and Public Relations Committee and the AAHKS Evidence Based Medicine Committee.

Where To Find Credible Joint Care Information

We all have our favorite commercials or advertisements that make us do a double-take or leave us reciting a catchy tag line. Direct-to-consumer marketing is a powerful tool and can be used to get people interested in and possibly purchase a company's product. In the material world this is an accepted form of advertising as it affords companies the ability to directly influence the consumer. It is through these mechanisms that a person can find themselves constantly upgrading their phone, buying the latest electronic device or trying new food products.

Smartphones, tablet computers and breakfast cereal are tangible items that we can take for a "test drive" before purchasing. **We cannot do the same in healthcare**. It is important to research and read the fine print in the direct-to-consumer marketing that occurs in healthcare advertising. In 1991, there was approximately $55 million spent on advertising prescription drugs; this has grown to more than $3 billion. Therefore, **maintaining a healthy amount of skepticism is crucial**. If the marketing sounds too good to be true, then it probably is.

Recently a satellite cable company with some very memorable advertisements was forced to remove their television advertisements as they were making unsubstantiated claims. Consumers should be equally skeptical of advertising for **implants, drugs, surgical procedures and specific approaches** that may or may not have substantial data or research to support the claims. Since the FDA relaxed the rules in 1997 on direct to consumer marketing, there has been a tremendous increase in advertisements via television, printed media, the Internet and radio ads. Guidelines to monitor such promotions are somewhat vague, so it is important to seek **legitimate sources** for accurate information.

*There are several sources of substantiated, peer-reviewed information on hip and knee replacements including the **AAHKS website (www.aahks.org)**. These are just some of the examples of topics that have been thoroughly vetted by AAHKS members and experienced surgeons:*

» Do I need a joint replacement?

» Surgical Options for hip arthritis

» Non-surgical options for knee arthritis

» Osteoarthritis frequently asked questions

*The **American Academy of Orthopaedic Surgeons** offers similar educational materials with topics on other joints as well.*

Other sources of education are the websites of the National Association for Orthopaedic Nurses, the American College of Rheumatology and the Arthritis Foundation.

These web sites are good sources of information in treating hip and knee disorders and will offer a comprehensive, yet patient-friendly review of treatment options. **After reviewing information from a credible site, you should discuss this with your physician and develop a treatment plan that best suits your own individual needs.**

This article has been written and peer reviewed by the AAHKS Patient and Public Relations Committee and the AAHKS Evidence Based Medicine Committee.

Addressing Implant Recall Concerns

How reliable will my new joint be?

Recalls of hip and knee replacement implants can cause understandable concern on the part of both patients and physicians. Those who have had joint replacement surgery with implants that were subsequently recalled may wonder if their health will be compromised or if they will need further surgery. If you are considering joint replacement surgery, you may be apprehensive about the longevity of the implants utilized.

Orthopaedic surgeons, national databases of implant performance called "registries," as well as implant manufacturers closely scrutinize outcomes of joint replacement implants. Fortunately, implant recalls are rare and affect a very small fraction of the more than seven million patients with hip and knee replacements. **Recall of a specific implant does not mean that all patients with that implant will have adverse health consequences, or require surgery to have the implants removed**. Many implants have been utilized in joint replacement surgeries for over ten years without ever being recalled, and these implants will likely never be recalled. **If an implant is recalled, it cannot ever be used in a joint replacement surgery again.**

Despite extensive laboratory testing, implants with newer technologies aimed at improving patient outcomes may have unacceptably high failure rates once used in large numbers of patients. If such an implant is recalled, the manufacturer notifies surgeons who have used the implant. **Your joint replacement surgeon can most effectively discuss implications of an implant recall, and serve as your advocate, if you are affected**. Surgeons will closely monitor patients with recalled implants to ensure that they remain healthy and intervention is prompt if a problem is found. Contact your joint replacement surgeon with any questions you have about implant recalls.

This article has been written and peer reviewed by the AAHKS Patient and Public Relations Committee and the AAHKS Evidence Based Medicine Committee.

Consent Form

Please sign the following form and bring with you to your pre-operative appointment with the Nurse Practitioner or Physician Assistant.

Acknowledgement of Understanding

The Total Joint Team feels it is of utmost importance that YOU, the patient, be well informed before the surgery. This has been shown to improve your results after the surgery. Therefore, we hold you responsible for the information in the joint replacement manual that has been issued and ask that you sign the statement below. Team members are available to answer your questions.

I have read the joint replacement manual and understand its contents as well as the potential risks and benefits associated with my upcoming surgery. All of my questions have been answered.

Patient Signature: _____

Date: _____

Print Patient Name: _____

Personal Questionnaire

Please complete the following questionnaire and bring with you to your pre-operative appointment with the Nurse Practitioner or Physician Assistant.

Questionnaire

We are asking you to fill out the following questionnaire before surgery. This form has been used around the country for many years and is the most respected research tool of its kind. As we stated before, research and feedback are vital for improvement of total joint replacement patient care. This questionnaire has some probing questions which can be unsettling to some. We do not intend to pry into anyone's mind or private lives. What we do need to know is if good results and good x-rays correlate with a patient's mood or emotions. We have also found using a questionnaire such as this, that the surgeon's perception of a good result is not always the same as the patient's.

Thank you in advance for your participation in this very important process.

Name:_____ DOB:_____
Date:_____ Date of Surgery and procedure:_____

HOOS JR. HIP SURVEY

INSTRUCTIONS: This survey asks for your view about your hip. This information will help us keep track of how you feel about your hip and how well you are able to do your usual activities. Answer every question by checking the appropriate box, only one box for each question. If you are unsure about how to answer a question, please give the best answer you can.

Pain
What amount of hip pain have you experienced the **last week** during the following activities?

1. Going up and down stairs

None	Mild	Moderate	Severe	Extreme
€	€	€	€	€

2. Walking on an uneven surface

None	Mild	Moderate	Severe	Extreme
€	€	€	€	€

Function, daily living
The following questions concern your physical function. By this we mean your ability to move around and to look after yourself. For each of the following activities please indicate the degree of difficulty you have experienced in the **last week** due to your hip.

3. Rising from sitting

None	Mild	Moderate	Severe	Extreme
€	€	€	€	€

4. Bending to floor/pick up an object

None	Mild	Moderate	Severe	Extreme
€	€	€	€	€

5. Lying in bed (turning over, maintaining hip position)

None	Mild	Moderate	Severe	Extreme
€	€	€	€	€

6. Sitting

None	Mild	Moderate	Severe	Extreme
€	€	€	€	€