Hip Replacement Surgery

With

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Tucson Orthopedic Institute

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TUCSON ORTHOPAEDIC INSTITUTE

Introduction

Dear Patient:

Thank you for choosing Tucson Orthopedic Institute for your inpatient care.

If you are reading this manual, you have probably made the decision to have a hip replacement surgery. This can be a scary time for you with a lot of questions. We hope that this manual will help answer your questions and alleviate some of the feelings of nervousness you may have.

This booklet addresses many of the most frequently asked questions about hip replacement. Please remember that this information does not substitute for direct communication with your surgeon's office. If you have questions, you are welcome to call to clarify any issues that concern you. We encourage you to take the booklet with you to the hospital for reference and to use it as a place to write additional notes regarding your surgery.

Your satisfaction is very important to us, and we will do whatever we can to make sure that your experience is smooth and trouble-free.

HIP REPLACEMENT SURGERY

Total hip replacement surgery has become a common orthopaedic procedure in the United States. Hip replacements are performed to alleviate conditions caused by osteoarthritis, rheumatoid arthritis, fractures, dislocations, congenital deformities, and other hip-related problems. The surgery involves replacing the damaged surfaces of the hip. The head and the neck of the femur (thigh bone) are removed and replaced with a ball and stem, called the femoral component. Then, the damaged hip socket is lined with a metal "cup." A liner is placed into the cup. The liner can also be made from different materials, but is usually plastic or ceramic. The ball can be made of different material, such as metal or ceramic. The ball of the femoral component fits into this liner, or bearing surface, creating a new, moveable joint.

Before l983, most hip replacement surgeons in the United States used acrylic cement to attach the prosthetic parts to the femur and pelvis. This method involved filling the area between the metal prosthesis and the surrounding bone with acrylic cement. In 1977 the use of porous-coated implants became more popular in the U.S. The porous-coated method, which involves the use of implants with sintered, metal porous surfaces, requires no cement.

The major difference between our porous-coated prostheses and the cemented ones is the metal surface of the implants. Cemented implants have a smooth surface, while porous-coated implants have a rough surface that resembles thick metal sandpaper. The surrounding bone grows "into" the porous surface of the prosthesis, essentially making it a part of the body. Close contact to bone helps hold the porous-surfaced implant in place until bone ingrowth has occurred. Most patients are allowed to put full weight on their hip after surgery. Together we will determine how much weight you can put on your hip based on the fit of the stem and the x-rays taken after surgery.

Although this porous-coated method was initially developed for our young, more active patients, experience has indicated that this method works equally well in patients of all ages and lifestyles. A porous-coated hip replacement is particularly attractive for patients with active lifestyles, regardless of age. It is also the method of choice for revision operations. If either a cemented or porous-coated prosthesis has failed, the we will routinely replace it with a porous coated one.

Lastly, the immediate benefits of total hip replacements are excellent. In most uncomplicated cases, patients can expect to be relatively pain-free, have full hip mobility, and walk with minimal or no limp 2 months after surgery. The operation usually takes about 1-2 hours, much less time than many other surgical procedures. For most patients, the hospital stay is usually one day. For younger, more active patients the hospital stay can be shorter.

Rapid Recovery (Minimally Invasive) Total Hip Replacement

There is a tremendous amount of information available to patients about minimally invasive hip surgery. Most of this is marketing material that is designed to make the surgery more appealing to patients. However, we did not focus just on the length of the incision, we focused on a team concept designed to speed recovery and return to work. This team approach included patient education, presurgical planning, less traumatic surgery, better anesthesia, pain control, and faster return of function. All patients are benefiting from these minimally invasive initiatives.

We are using specially designed instruments that allow all patients to have the smallest incision possible. The main factor that determines the length of the incision is the patient's height and weight. We must make the incision long enough to do your surgery correctly, safely, and in a timely manner. With this approach the length of the incision has not influenced patient's recovery. In general, for patients that are not overweight the length of the incision is 3-7 inches.

We use two different surgical approaches: anterior and posterior. Together we will determine which approach is best for your hip. There are some patients that can benefit from all of the minimally invasive advances and go home same day or after just one night. These patients need to have appropriate body weight, be very motivated, and have a caregiver available to facilitate their early return home. For these patients we emphasize weightbearing as tolerated and ambulating with a single crutch or cane. To accomplish these goals therapy is started early and we will use narcotic pain medications only as needed. Instead, we will give you non-narcotic drugs such as celecoxib, a Cox-II anti-inflammatories to decrease your pain. In selected patients we will use short-term steroids to decrease the surgical inflammation and post-anesthesia nausea

Bearing Surfaces

Like minimally invasive surgery there is a tremendous amount of marketing that focuses on the hip ball bearing. Historically, the first hip bearings were metal on metal and metal on polyethylene. In the early 70's, despite good results, the metal on metal bearings were abandoned because of the manufacturing difficulties and expense. The metal on polyethylene became the standard. However, the older polyethylene and metal balls had high wear necessitating a revision ten to twenty years later. Improvements in the ball bearing followed three directions: improving the metal balls and polyethylene quality, the development of ceramic on ceramic and even combining a ceramic ball with a metal liner. Currently we do not know which bearing will last the longest. There are pros and cons to each bearing surface; therefore, you and your surgeon can decide which is best for you.

REVISION HIP REPLACEMENT

The most frequent reason for revision of a cemented total hip replacement is loosening of the implant from surrounding bone. Loosening of a porous-coated, cementless implant is very rare. The revision of porous coated components usually is necessary because of wearing out of the polyethylene liner in the cup. In many cases patients may have no symptoms, and the diagnosis of a damaged joint surface is made from patients' x-rays. Revision surgery is advised in these cases to prevent further bone damage that could lead to a more complex procedure later. For this reason, we ask our patients with well-functioning hip replacements to see us every 3-5 years. This is necessary to monitor signs of wear from our long-term patients' x-rays. These signs usually begin to appear in the first 10 years after surgery.

Preparation for revision surgery is more complex than for an initial surgery. Revision patients who had their primary surgery at another institution can help us by obtaining detailed records of previous surgeries so that we know exactly what types of damaged parts need to be replaced. Revision surgery can be relatively simple when it involves just the exchange of a ball and liner. However, the procedure is complex when it involves replacing a failed cemented stem or cup, since cement removal is tedious and time consuming. When the procedure includes removing cement or repairing damaged bone, the operation takes longer, and a patient's recovery time might be longer than for the first-time hip replacement.

Scar tissues from previous surgery and bone from the failed hip replacement require special attention both during and after surgery. For example, bone grafts may be used to rebuild areas where bone loss has occurred. Patients also may require multiple blood transfusions when revision surgery takes longer.

We customize the rehabilitation plan for each revision patient on the basis of the difficulty and the extent of surgery. Customized rehabilitation can be as simple as limited exercise or limited weight bearing, or as complex as using a brace for 6 to 12 weeks.

Bone Graft

If the bone is badly damaged, some revision total hip replacements require a bone graft or metal augments to reconstruct the deficient area. This is an unusual circumstance and will be discussed, in most cases, at the time of your office visit. The human-donor bone graft, which is obtained from a bone bank, has been tested for disease, a testing process even more stringent than the testing process for blood. Your surgeon and his assistants will be glad to answer your questions about bone grafting and will review the advantages and disadvantages with you.

Heterotopic Ossification and Radiation

Following total hip replacement, some patients may develop abnormal bone formation in the muscles and ligaments surrounding the hip joint. This condition, known as heterotopic ossification, can cause stiffness in the joint. In most cases, but not all, we can identify patients who are at higher than normal risk for developing heterotopic ossification. Radiation therapy, given before surgery, can reduce the risk of heterotopic ossification for these patients. Radiation

therapy is low dose, painless, and does not cause sickness. The decision for radiation therapy is made before surgery, and the therapy is usually done at an outside hospital.

RAPID RECOVERY (Minimally Invasive) HIP REPLACEMENT

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We are using specially designed instruments as well as robotics that allow all patients to have the smallest incision possible. The main factor that determines the length of the incision is the patient's height and weight. We must make the incision long enough to do your surgery correctly, safely, and in a timely manner. With this approach the length of the incision has not influenced patient's recovery. In general, for patients that are not overweight the length of the incision is 3-7 inches.

Together we will determine which procedure is best for your hip. There are some patients that can benefit from all of the minimally invasive advances and go home the same day as surgery. These patients need to have appropriate body weight, be very motivated, and have a caregiver available to facilitate their early return home. For these patients we emphasize weightbearing as tolerated and ambulating with a single crutch or cane. To accomplish these goals therapy is started early and we will use narcotic pain medications only as needed. Instead, we will give you non-narcotic drugs such as celecoxib, a Cox-II anti-inflammatories to decrease your pain. In selected patients we will use short-term steroids to decrease the surgical inflammation and post-anesthesia nausea.

STEPS TO PREPARE FOR A HIP REPLACEMENT

Office Visit and Consultation

Planning begins with your first office visit. At that time, if possible, you should bring recent x-rays of your hip, a medical summary that describes your current health status, a list of current medications and doses, and insurance information. Your initial office visit is usually a lengthy one, and can take an hour or more. You will be seen by the surgeon and several members of the joint replacement team. The objective of this first office visit is to determine if hip surgery is necessary. We base this decision on many factors, including the degree of pain, severity of a limp, the extent of decreased mobility, how much these problems interfere with your activities or quality of life, and your overall dissatisfaction with nonoperative treatment methods. Another important consideration is your current health status. After evaluating your x-rays and completing the physical examination, the doctor will be able to discuss with you the relative advantages and disadvantages of the surgical procedure and what the outcome should be.

Our joint team includes the surgeon, the medical assistant and surgical coordinator, the Physician's Assistant, consulting physicians, physical and occupational therapists, nurses, case managers, and the surgical secretary. These highly skilled members of our joint team will be an integral part of your overall care and are available to answer any questions you may have. If requested, they will also put you in touch with other patients who have had similar problems treated by hip surgery.

Radiography (X-Rays)

Although you may already have x-rays of your hip, we may request that new x-rays be taken in our office. By reviewing x-ray pictures of your hip we can determine the extent of damage and plan your surgery. For this reason, the x-rays must be taken according to specific guidelines. The legs must be positioned at the correct distance from the x-ray machine. This positioning is necessary so that magnification can be controlled and accurate measurements obtained to determine the size and the shape of the prosthesis.

Multiple x-rays are used during the preoperative planning. If previous x-rays have been obtained by our recommended techniques, it is possible for us to give a better second opinion. An x-ray is also taken in the recovery room immediately after surgery to observe the placement of the prosthesis. X-rays are also an important part of your annual follow-up visits. They ensure that there are no problems or show any possible problem that could be developing despite the lack of symptoms.

Scheduling Surgery

Once a decision has been made to have the surgery, a surgical coordinator or the office nurse will help you select a surgery date. The office staff will schedule the date of your surgery and help you begin the steps to prepare for surgery.

Surgery is usually scheduled several (about 6-8) weeks after your office visit. Several factors influence the scheduling date. The most important factors are your general health, and operating room availability.

Medical Clearance

Many patients having joint replacement surgery may have other medical problems that we like to have evaluated by a medical specialist before surgery. To be sure the medical clearance is correct it must be done not more than 60 days prior to surgery. The medical clearance must include a complete history and physical, laboratory tests, blood profile, and urinalysis. Depending on your age and medical history, you may also need a chest x-ray or electrocardiogram, which must be legible. We prefer that the history and physical be performed by a staff internist. You will receive a History and Physical form from the office staff if you are going to be medically cleared by your own physician.

Reducing the Risk of Infection

The possibility of hip infection caused by bacteria already within your system must be minimized. The most likely sources of these bacteria would be a dental or kidney infection. Abscessed teeth and pending dental work should be taken care of at least one month before surgery. A urinary tract infection (UTI) might affect your new hip. Although frequency, urgency, and burning are symptoms of a urinary tract infection (UTI), you may have an infection without symptoms. As a part of your medical clearance, a test of your urine will be performed and, if an infection is found, antibiotic treatment may be required before your operation.

Decolonization Techniques Prior to Orthopedic Surgery

Date of Surgery:______________________________

Nasal Ointment (2% Mupirocin) for 3 days: Start______________ Stop______________

Soap (4% Chlorhexidine/Hibiclens) Baths for 3 days: Start_____________ Stop______________

Cleansing the skin and using nasal ointment in a process called "decolonization" can help reduce risk of post-operative infections in select populations, especially those colonized with certain bacteria (such as MRSA=Methicillin Resistant *Staphylococcus aureus*). Your doctor may prescribe the ointment (=mupirocin) and soap (=Hibiclens or 4% Chlorhexidine) below after discussing treatment with you. The following is information on how to use the ointment and soap.

How to use the nasal ointment (2% Mupirocin)

You should use a pea-sized/small amount of ointment inside each nostril each time you apply the ointment

1. Clean your hands using a sanitizer gel or wash with soap and water for 15-20 seconds just before using your ointment.

2. Tilt your head back and use a cotton swab (Q-tip) to apply the ointment to the inside of each nostril.

3. Pressure your nostrils together and massage for about 1 minute.

4. Do not get the ointment near your eyes-if any gets in your eyes, rinse them well with cool water.

5. Apply the nasal ointment twice a day for 5 days prior to the surgery (including the morning of surgery).

6. Clean your hands using a sanitizer gel or wash with soap and water as soon as you are finished.

7. Do not use any other medicines inside the nose (such as, nasal sprays) during the 5 days you use the ointment.

How to use the soap (4% Chlorhexidine or CHG for short=Hibiclens)

Your soap will come in a bottle.

1. Use about 2 tablespoons of soap for each application in the shower or bath.

2. In the shower or tub, first wash your body with regular soap and use your regular shampoo to wash your hair then rinse off all residual soap and shampoo. This is done first so the CHG/Hibiclens soap is not washed off by your soap or shampoo.

3. Turn water off to avoid rinsing off the CHG/Hibiclens soap too soon.

4. Using a clean washcloth, apply the CHG/Hibiclens soap to all areas. **DO NOT USE ABOVE THE NECK, AVOID YOUR FACE, AND KEEP OUT OF YOUR EYES, EARS, AND MOUTH. AVOID THE GENITAL AREA.**

5. Do not scrub too hard, but make sure to thoroughly and gently wash the skin with the Hibiclens/CHG soap for 5 minutes with the washcloth. Ensure it is applied to the armpits, groin (avoiding genital area), behind the knees, and between skin folds, paying special attention to the area where the surgery or procedure will be done. The soap will not likely bubble or lather, but this is fine.

6. Turn the water back on and rinse thoroughly.

7. Do not use regular soap after the CHG/Hibiclens soap has been applied.

8. Pat dry with a clean towel and put on clean clothes.

9. **DO NOT** apply lotions, powders, or perfumes to the areas cleansed with CHG/Hibiclens after bathing. Notify your doctor if you experience any side effects from the soap.

Preoperative Medications

Patients should stop taking aspirin 10 days before surgery and other anti-inflammatory medicines at least 7 days before surgery. The most common non-steroidal, anti-inflammatory medicines that must be stopped include: Advil, Anaprox, Ansaid, Butazolidin, Clinoril, Daypro, Dolobid, Feldene, Ibuprofen, Indocin, Lodine, Meclomen, Motrin, Nalfon, Naprosyn, Orudis, Ponstel, Relafen, Tolectin, and Voltaren. Patients who take estrogen supplements should ask their medical clearance physician about when to take them. You may take Tylenol for pain during this time. Many vitamins and herbal treatments can cause bleeding or interact with medications given during surgery. We recommend that supplements not prescribed should be stopped a week before surgery.

Hospital Preoperative Appointments

Once your surgery is scheduled, you will be contacted by the Scheduling Center to assist you in coordinating all of your preoperative interviews and tests. Because these preoperative visits may take 2 to 6 hours, every effort is made to schedule all of your visits on the same day. In the back of this booklet, you will find a preoperative checklist that you can use to keep a record of your appointments. **It is very important that you arrive on time for all preoperative scheduled appointments at the hospital.** If you have difficulty walking, the volunteer at the hospital information desk will provide a wheelchair. However, we encourage you to bring someone with you to help you get to your appointments on time. The best person to accompany you for this visit is the friend or relative who will be assisting you when you leave the hospital after your surgery.

Preoperative Surgical and Pre-Anesthesia Interview

The surgical liaison nurse will review your past medical history, confirm doses of current medications, and give you instructions for the night before surgery. The surgical liaison nurse will also tell you exactly when and where to report the day of surgery.

Preoperative Physical Therapy Consultation

Often times part of your preoperative preparation includes a visit with a physical therapist. We encourage any family member or caretaker to accompany you to these sessions to help you with your exercises. The therapist will teach you strengthening exercises, how to use a walker or crutches, stair climbing and dislocation precautions. Because of the many months of pain and decreased physical activity you may have had before surgery, your muscles may not be in the best condition. We have found that patients often do better after surgery if they attend this therapy session and work on the exercises before surgery.

During the preoperative visit, the physical therapist will also ask about your home environment and any special home equipment needs you may have. It is important that the

equipment fit both you and your home. We recommend that you do not purchase any equipment until you have discussed it with the therapist. The therapist will ask you about the layout of your bathroom, and request measurements of the shower stall and bathtub. For the bathtub, measure the floor itself; do not include the back or side slants of the tub. Almost everyone will need a 3-in-1 elevated commode seat with arm rests and adjustable legs, a shower bench, a long-handled shoe horn, a longhandled sponge, and a reacher for dressing. Insurance coverage for the purchase of equipment depends on your policy. You can check your policy for coverage of "durable medical equipment." The hospital case manager can also assist you in finding out your share of the cost for equipment; your therapy team will help order the equipment once you are in the hospital.

YOUR HOSPITAL STAY

Reporting to the Hospital

On the day of surgery, you will report to the preoperative unit of the hospital. You will be escorted to an area where you will change into a hospital gown. An identification bracelet will be placed on your wrist. An admissions nurse will make sure that your medical work-up has been completed, and that we have copies of your preoperative history, physical exam, lab tests, EKG, and chest x-ray reports. You will then be escorted to an area where a nurse will make you comfortable and provide warm blankets. An intravenous line will be started. You will see your surgeon and the anesthesiologist before going into the operating room.

Post-Anesthesia Care Unit (PACU)

A typical hip replacement operation takes approximately one and one-half hours. Revision surgery often takes longer since it is more complex. After surgery, you will be moved from the operating room to the post-anesthesia care unit (PACU), often referred to as the recovery room, where the nurses will monitor your vital signs and oversee your recovery from anesthesia. Your stay in the PACU lasts approximately 2 hours. When you awaken in the PACU, you will notice that there may be a drainage tube under the hip bandages to drain blood from the hip and prevent swelling.

You may receive oxygen through nasal breathing tubes for 24 hours. To empty the bladder, you may have a urinary catheter, which will be removed on the first or second postoperative day. Pneumatic compression boots are also placed on both feet to help improve circulation. An air pump inflates and deflates air-filled pressure compartments within the boot. This rhythmic change in pressure promotes blood flow and also helps prevent blood clot formation.

Family Waiting Area

Family members are not permitted to visit with patients in the PACU. The Joint Replacement Unit Secretary will notify family members when you are transferred to your room. When you have recovered from anesthesia, you will be moved to your room in the Joint Replacement Unit. Family members are asked to wait on the second floor in the Family Waiting Area. Hospital volunteers are available to answer questions and keep family members posted on your progress. At the end of the surgery, your surgeon will meet with your family members to discuss your surgery. If family members leave the waiting area, they should let the volunteer know where they will be. If members of the family are unable to be at the hospital on the day of surgery but would like to talk with the surgeon, they should leave a phone number where they can be reached.

POSTOPERATIVE COURSE

Joint Replacement Unit

The Hospital floor is an orthopaedic unit designed especially for joint patients. The unit is staffed by a team of nurses and therapists who specialize in both joint replacement as well as other surgical procedures. It includes a physical therapy gym and a small area for visiting. Family members are urged to attend both physical and occupational therapy sessions conducted in this unit to learn appropriate care techniques and ways to assist you at home. Your surgeon and hospitalist direct all of your care on the unit.

Your Hospital Room

Your hospital room will be in the Joint Replacement Unit in the hospital. Your family will be permitted to visit with you, but we request that the first visit not be prolonged. Most of the rooms are semiprivate (two beds). Each bed has a personal telephone, television, and bedside table. There is a small closet available for storing your clothes. With hospital approval, the patient's spouse is permitted to stay overnight on the sleep sofa in the private room.

Pain Medicine

Patients should expect pain for 24 to 36 hours following hip replacement surgery. We want you to be comfortable but also awake and alert enough to do exercises, including breathing exercises to prevent lung congestion and leg exercises to prevent blood clots. When you have recovered from anesthesia, your pain usually is managed by either oral analgesia or intravenous analgesia.

If you have an intravenous method for pain control, the intravenous line is usually connected to the IV tubing in your arm. The medicine will take a few minutes to work. If you do not get adequate relief, be sure to let your nurse know so that we can make appropriate adjustments in the dose of medicine and time intervals between doses.

All medications have potential side effects, and pain medications are no exception. A few people may experience side effects such as itching, mild nausea, or drowsiness. Please let your nurse know if this occurs, so that the doctor can prescribe something to control the side effects.

Wound Care

Patients typically receive a waterproof, silver impregnated dressing called Aquacel. This should stay on for 7 days after surgery. It can be removed at home, and the would should be covered with a clean and dry dressing after that.

You may notice that your hip is slightly swollen and that there is some discoloration (like a bruise) in the leg. This is from the bleeding that occurs shortly after surgery. The discoloration,

which may extend to the hip or ankle, will slowly disappear. To close the wound, your surgeon uses either sutures or staples, which are removed by the nurse around 14 days after surgery if there is no wound drainage. Occasionally, a slight amount of bloody drainage appears along the incision. It is important to keep the wound clean and dry until all the drainage has stopped. You may wash around the incision and let the water run over it. Be sure to pat the area gently until dry. Some patients shower in the hospital prior to discharge.

Preventing Blood Clots

Clots can develop in the veins of the leg because surgery stimulates the blood to clot, and inactivity after surgery permits blood to pool in the veins of the leg. Exercising your leg muscles as soon as you return to your hospital room from surgery is very important to help prevent clots. We often use a type of boot that inflates approximately every minute, squeezing your foot and pushing blood through the veins to prevent clotting. Also, we use medication to thin your blood.

There are many types of blood thinners available. Aspirin is the most commonly used anticoagulant with the lowest side effect profile and the highest blood clot prevention rates. Some patients may require a different anticoagulant than Aspirin.

Vascular Imaging is an ultrasound test used to examine the veins of your legs. This is a painless test that permits us to see clots in your veins. This test is done if there is a suspicion that you have developed a blood clot. If a clot is found, your surgeon will evaluate and treat it appropriately; treatment can range from simple observation to hospital admission and anticoagulants. If we find small clots in the veins below the knee, we usually do not institute treatment but may repeat the test in a few days to make sure the clots have remained small. These clots generally dissolve on their own. Larger clots or clots in the thigh or groin are treated to keep them from getting larger. Your hospital stay could be prolonged if we have to regulate medication to slow the clotting speed of your blood.

Incentive Spirometer

After you awaken from anesthesia, it is very important to perform deep breathing exercises that help prevent pneumonia. You will be encouraged by the nurses to perform deep breathing exercises using a small plastic breather (spirometer) every hour while you are awake. This spirometer allows you and your physician to see your progress toward improving your breathing. You will be given a spirometer to practice on before your surgery. The surgical liaison nurse will show you how to use the spirometer.

Meals

On the day of surgery, you probably will have little appetite. Usually you will be offered only liquids and will progress gradually to a normal diet. Patients who follow a special diet, such

as a low-fat, low sodium, cardiac, or diabetic diet, should let the nurse know, so it can be ordered for you. After surgery, you will be able to select your meals from a daily menu. Special write-in requests (for foods such as fresh fruit, soup, or a turkey sandwich) are also honored, if available. Juices, sodas, crackers, toast, and ice cream are always available between meals on the unit. There is also a cafeteria in the hospital that is open for breakfast, lunch, and dinner. Family members may purchase a meal there and join you for a meal in your room, if desired.

Clothing

Hospital gowns are suggested during the day of surgery. You are encouraged to bring jogging clothes, t-shirts, pajamas, sweat pants, or shorts for the rest of your stay, so that you will be more comfortable during therapy sessions in the gym and when you are walking around the hospital. Tennis shoes, loafers, or comfortable support shoes should be worn; we do not recommend bringing new shoes. If you plan to buy a pair of Velcro-closure shoes, please be sure to break them in before coming to the hospital.

Physician Rounds

Our doctors will visit you daily while you are in the hospital, explaining your blood tests and progress and addressing your concerns. The Internal Medicine Hospitalists participate in this process, and you will quickly appreciate their contributions to your hospital care.

DAY OF DISCHARGE

The day of discharge is a busy one. Before you leave the hospital, you will be given an individual exercise program designed by your surgeon and the physical therapist. These exercises are to be performed at home until your follow-up visit. Often, a family member or friend is needed to assist with some of the exercises for a week or two. If family or friends have not attended physical or occupational therapy sessions before this time, they are encouraged to do so on the day of discharge.

Final Discharge Instructions/Prescriptions

Your surgeon and/or hospital staff will see you on the day of discharge and answer any questions you may have. At the time of discharge, the nurse will give you your prescriptions and review discharge instructions. Most patients have some discomfort at home when they perform their exercises. You will receive a prescription for pain medication before surgery, but once home, you should begin to decrease the number of pills you take and increase the interval of time between doses.

Pain medication should be taken before therapy or sometimes at bedtime, as needed for your comfort; a non-narcotic medicine can be used in between. Applying ice to your hip after therapy helps to control discomfort.

On the day of discharge, the case manager will tell you the name and telephone number of the outpatient clinic or home health agency that will be serving you and identify the services to be provided.

Written Discharge Instructions

You should receive a copy of our discharge instructions to remind you that:

1. It is not unusual to have some swelling in your lower legs after surgery. Elastic stockings need to be worn during the day until your follow-up appointment with your surgeon. Beginning one week after going home, you may remove the stockings at bedtime. Walking every hour during the day and doing your exercises will help strengthen your muscles and resolve the swelling. If you have swelling, we recommend that you lie down every two hours, elevate your legs with pillows, and apply ice to your hip for 15 minutes.

2. You are permitted to shower at home. Ask for assistance from a friend or family member when getting in and out of the shower.

3. You should have a copy of your home exercises from the physical therapist. Do your exercises throughout the day.

4. You should be walking in your home at least every two hours. Use your crutches, cane, or walker as instructed by your therapist. You are encouraged to walk outside with assistance, weather permitting, for 20 minutes a day. Often people will notice some clicking in the hip with activity. THIS IS NORMAL and does not mean there is something wrong with the prosthesis. DO NOT drive or take long trips until after your six-week visit.

5. Your hip will be sore but pain will dissipate over time. You will be given a prescription for narcotic pain medicine that can be used primarily BEFORE THERAPY and AT BEDTIME. Extra-Strength Tylenol can be used instead of the narcotic. To ease your discomfort, apply ice to the hip after activity.

Going Home

By Car

Patients are able to go home by car after hip replacement surgery. If your trip home will take more than two hours, plan on allowing one or more stops for walking and exercising your legs. A van or large car will suffice as long as there is room to stretch out your leg rather than bending it. Discharge from the hospital usually takes place in the late morning after a final session of exercises and instructions from the therapists and nurses. Most patients are eager to miss rush hour traffic.

By Airplane

If you need to travel by air, it is important to request a bulkhead or first class seat, so that you will have enough room to stretch out your leg during the flight. It is advisable to have a travel companion, who can help with your luggage and with getting on and off the plane. Occasionally, your surgeon may recommend that a long airplane ride be postponed for several days after discharge from the hospital. The case manager can recommend appropriate lodging locally until you are ready to go home, and will also help you arrange transportation to the airport by taxi.

Getting into Your House & Using Stairs

The physical therapist will teach you how to go up and down steps. However, when you arrive home, you may need someone to take your arm for balance and guidance for curbs, steps, and doorways, especially if there are no railings for support. You should have someone help you with steps until you are comfortable and secure with them. Remember that when you use a staircase, your crutches go under your arm on the opposite side from the railing. To go up the stairs, start with your unoperated leg; to go down, begin with crutches and the operated leg.

RETURNING FOR YOUR FIRST POSTOPERATIVE VISIT

We see all our postoperative hip replacement patients approximately two to four weeks from the time of their surgery. This will be arranged for you by our staff, and you will be notified when your visit is. You should confirm this appointment with your surgeon's office after discharge. We need as much lead time as possible to accommodate any wishes concerning the time and date of your follow-up examination.

This first follow-up visit will include measurements of swelling, hip motion, and strength by physical therapy; and an examination of the hip. Also, x-rays of the operated hip will be obtained to evaluate the alignment and fixation of the implant. You will receive new instructions concerning your allowed activities and the amount of weight you can put on the operated leg. At this time, the surgical stockings are usually discontinued unless leg swelling persists.

Arrangements can be made on an individual basis for out-of-state patients.

Annual Follow-up Visits

We strongly recommend a return visit annually for the first two years and then every two to three years thereafter. These visits are important whether or not you are having problems with your hip. Over 95% of total and partial hip replacements continue to function well for more than ten years, but it is important to remember that with the increasing years of pain-free use, the implant may wear. The plastic part of the implant eventually may show signs of deterioration. This can only be determined by studying your follow-up x-rays.

Medications to Stop Before Surgery

Seven days before surgery you need to stop

- Any anti-inflammatory (Advil, Motrin, Alleve, etc)
- Any Herbal Supplementations
- Vitamins (E, C, K, etc)
- Aspirin

Five days before surgery you need to stop

- Coumadin
- Plavix

One day before surgery you need to stop

- Metformin

You can continue to take the following medications

- Tylenol
- Celebrex
- Ultracet
- Glucosamine Chondroitin
- Iron Supplements
- Ultram

*Please take a moment to speak with your medical doctor about your regular prescription medications (blood pressure, heart, cholesterol, etc) and what effect they may have on your surgery

WHAT SHOULD I DO TO PREPARE FOR MY SURGERY?

- Arrange for a family member or friend to accompany you to the hospital the day of your surgery
- CANCEL ANY DENTAL APPOINTMENTS THAT FALL WITHIN 4 WEEKS OF YOUR SCHEDULED SURGERY AND 3 MONTHS AFTER YOUR SURGERY
- Avoid any injections into your surgical joint for 3 months prior to surgery
- You will be discharged from the hospital as discussed previously, so plan ahead for transportation home from the hospital
- Arrange for someone to stay with you for the first week after surgery
- Remember to adjust your work and social schedule accordingly during your anticipated recovery time
- Remove small throw rugs or other small obstacles that may be in your path at home
- If you have pets, you may want to arrange for someone to assist in caring for them for a few days after you return home
- While taking narcotic pain medication you will NOT be permitted to drive. Oxycontin and Hydrocodone or oxycodone (Vicodin or Percocet) are Narcotics. You may need to arrange for transportation to your initial follow up visit
- You will need to follow up with Dr. Goodman within two weeks after surgery. You can call the orthopedic clinic prior to your surgery to schedule that appointment. (This appointment may have already been made for you when you sign up for surgery)
- In order to stay hydrated after surgery, pick up some alternatives to water, for example: Gatorade, Juice or Vitamin Water.

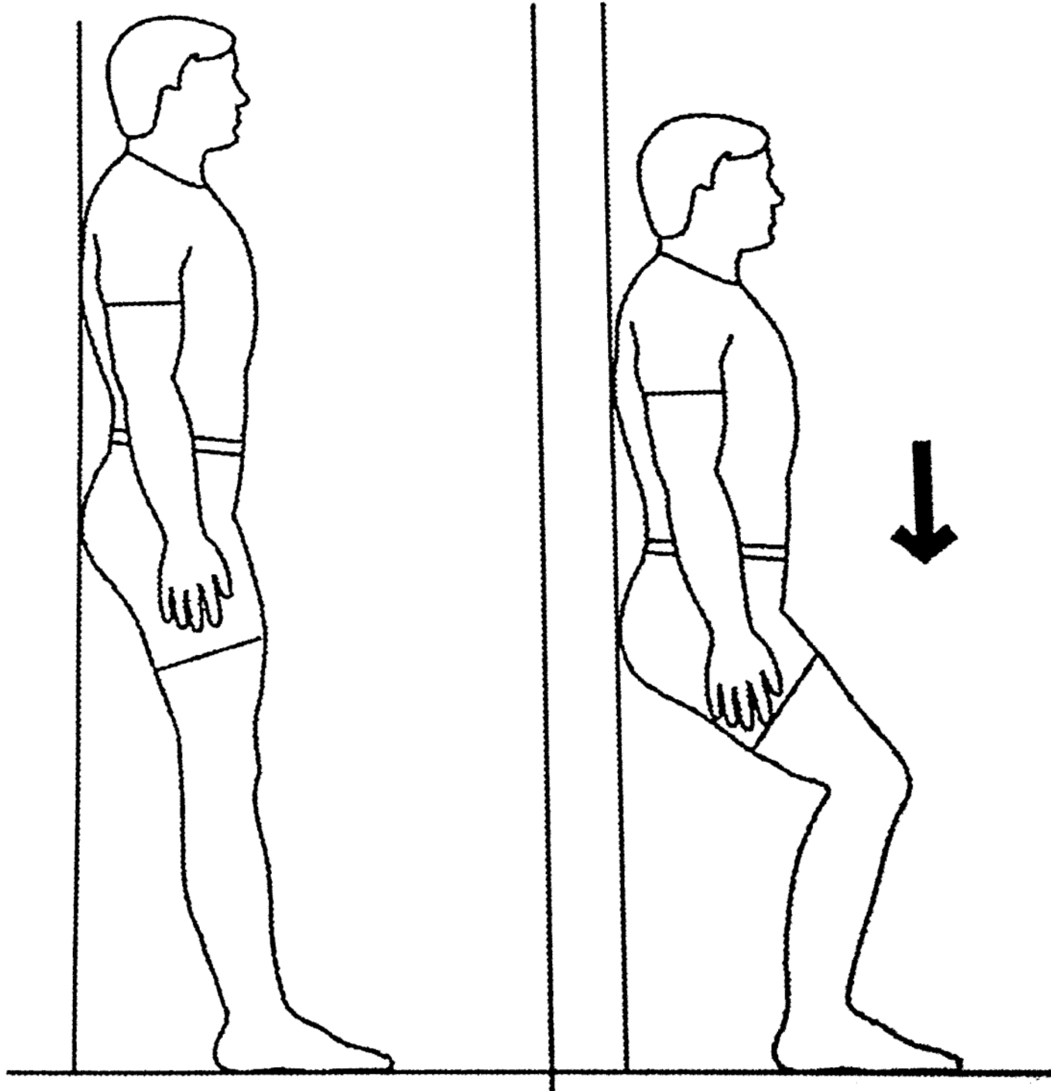
Pre-Operative Exercise Program

If you are currently performing an exercise program, continue doing so

If you are not currently performing an exercise program, you may incorporate exercises as directed on the hand-outs in this manual

After surgery your physical therapist will give you an exercise program and progress you appropriately

Mini Wall Squat

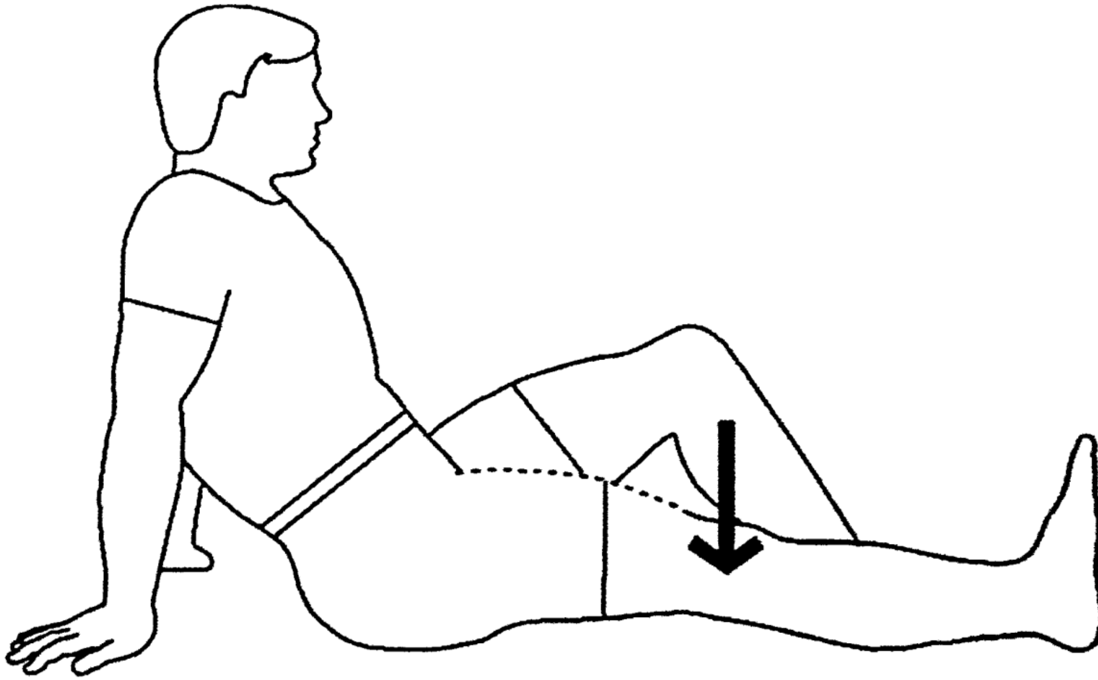


- Lean on the wall, feet approximately 12 inches from the wall, shoulder distance apart
- Bend knees to 45 degrees
- Hold for 5 seconds
- Return to start position and repeat

Special Instructions

Perform 3 sets of 10 repetitions, once a day
Rest 1 minute between sets
Perform 1 repetition every 4 seconds

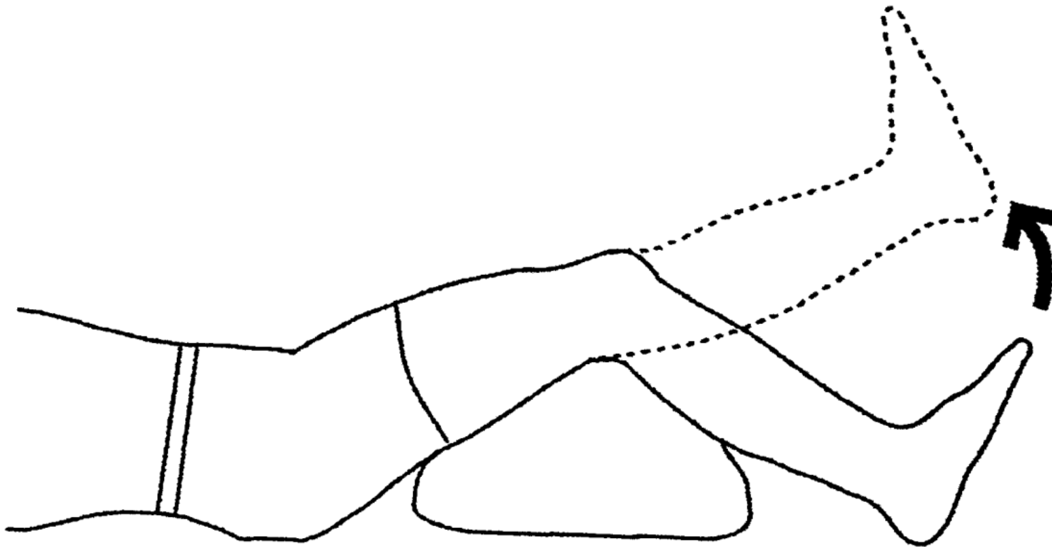
Quad Set



- Sit with Leg extended
- Tighten Quad muscle on front of leg, trying to push the knee downward
- Return to start position

Do Not hold breath
Perform 3 sets of 10 repetitions, once a day
Rest 1 minute between sets
Perform 1 repetition every 4 seconds

Supine Knee Extension

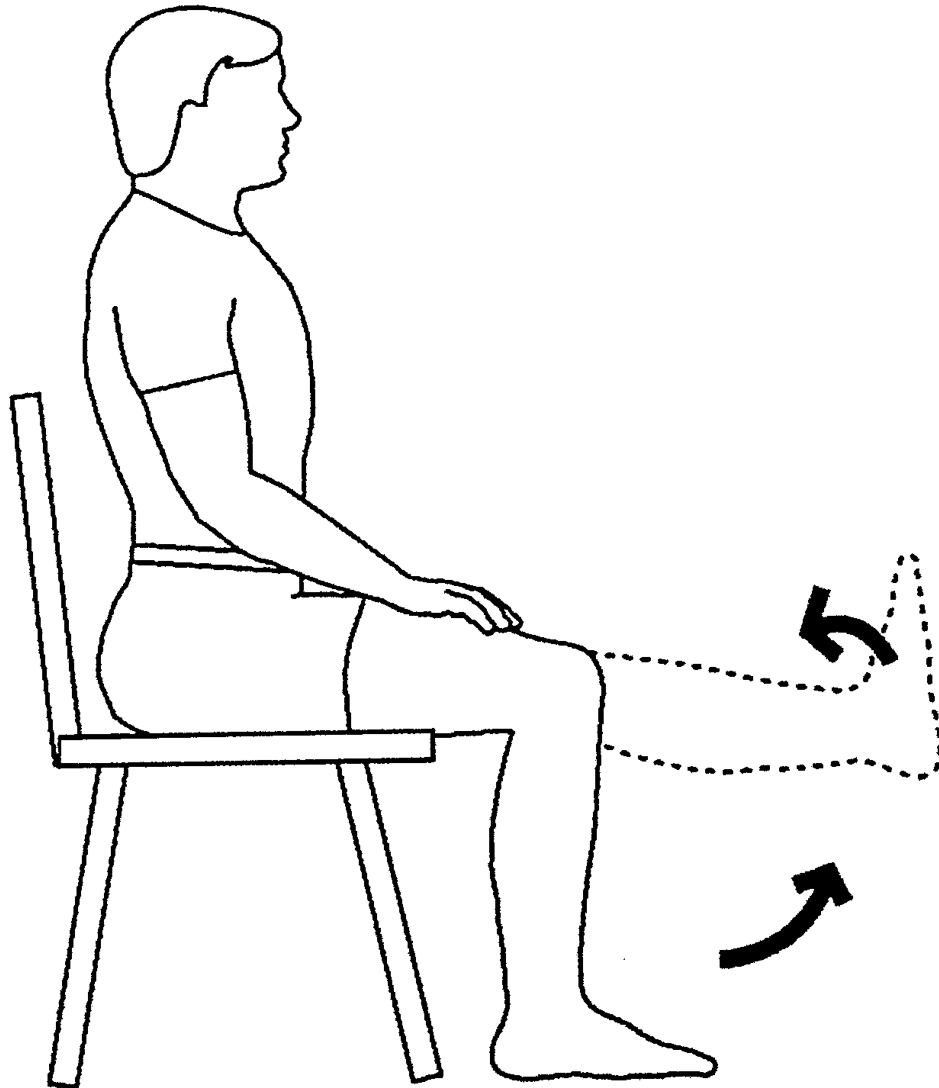


- Lie on back, with involved knee bent to 45 degrees, supported with a pillow, as shown
- Straighten leg at the knee
- Return to starting position

Special Instructions

Perform 3 sets of 10 repetitions, once a day
Rest 1 minute between sets
Perform 1 repetition every 4 seconds

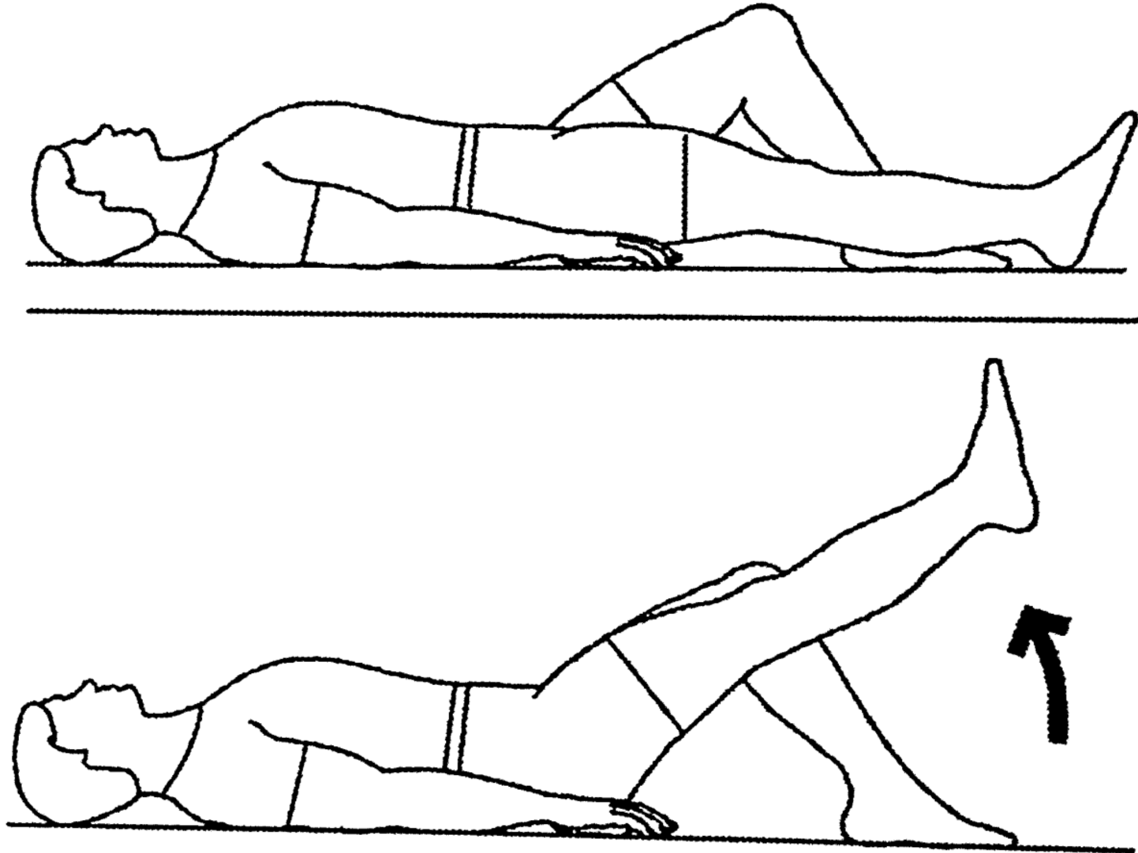
Seated Knee Extension



- Sight against a wall, chair, or on a firm surface with knee bent
- Keep a proper curve in low back as shown
- Flex foot upward while straightening knee
- Repeat with other leg

Perform 3 sets of 10 repetitions, once a day
Hold for 20 seconds
Rest 1 minute between sets
Perform 1 repetition every 4 seconds

Straight Leg Raise



- Lie on back with uninvolved knee bent as shown
- Raise straight leg to thigh level of bent leg
- Return to starting position
- Repeat with other leg

Perform 3 sets of 10 repetitions, once a day
Hold for 20 seconds
Rest 1 minute between sets
Perform 1 repetition every 4 seconds

Supine Hip Abduction

- Lie on back on firm surface, Legs together
- Move leg out to side, keeping knee straight
- Return to starting position

<u>Special Instructions</u>
Use a pillow case to reduce friction
Perform 3 sets of 10 repetitions, once a day

Rest 1 minute between sets
Perform 1 repetition every 4 second

Medications for Before Surgery/Morning of Surgery

2 DAYS before Surgery

- Start Senokot or Colace (both are over-the-counter medications which don't need a prescription)
- If you experience loose or watery stools, STOP using the Senokot or Colace and resume it the night of surgery

Night Before Surgery

- Nothing to eat after midnight
- Get a good night's sleep

The Morning of Surgery

- No coffee or food
- You can drink ONLY WATER or GATORADE up to 2 hours prior to arriving at the hospital
- Plan to arrive to the hospital 2 ½ hours before your scheduled surgery time
- Leave all your valuables at home

When will I find out my Surgical Time?

- Do not eat anything after midnight the night before surgery, regardless of your surgical time
- The hospital will call you after 3:00 pm on the day before surgery with your surgical time. You can call the OR scheduling office between 3:00 and 5:00pm to find out your surgical time.
- If you do not receive a call, you can call the main OR. They will have your surgical time after 6:30pm the night before surgery.

What do I need to do the day of my surgery?

- Take medications as instructed by Dr. Goodman's staff or your primary care doctor
- Arrive at the hospital as instructed. You will need to come to the preoperative holding area. You can park in the parking lot in the East or South parking areas.

If you have questions about parking at the medical center, please call the volunteer services

What do I need to bring with me the day of surgery?

- Photo ID
- Cane or crutches; if you do not have these devices, they will be given to you at the hospital by the physical therapist
- Friend or Family Member
- Dress appropriately
  - Loose-fitting pants, with an elastic waist band
  - Shoes with non-skid sole, that you can easily put on, keeping in mind that swelling may be present

What should I leave at home?

- Jewelry
- Money/valuables
- Contact Lenses

Therapy in the Hospital

- You will receive a session of occupational therapy prior to your physical therapy. The occupational therapist will teach you how to get in and out of bed, and how to dress yourself. You will also be instructed on how to get in and out of the car

- All patients will receive physical therapy before being discharged from the hospital. The session will consist of getting in and out of bed, standing, walking and going up and down stairs.

- Friends and family are encouraged to attend your physical therapy session with you.

- If you are taller than 5’4”, you will be issued a raised toilet seat to help with your elimination needs after surgery

- You will be allowed to put full weight through your leg most of the time

You will leave the hospital with a cane, crutches or walker. At some point during your hospital stay you will walk without an assistive device

Post-Operative Medications

Oxycodone 5mg: Narcotic pain pill, to be taken every 6 hours after surgery, you will get your specific schedule at the hospital with your discharge instructions. You will be weaned off of this medication in the first 5-7 days after surgery.

Tylenol 650mg: This will be the medication that is taken every 8 hours, on a schedule, to lower your baseline level of pain. You will be on this medication for 4-6 weeks after surgery as needed.

Celebrex (Celecoxib) or Meloxicam (Mobic): Anti-inflammatory, take it twice a day for a total of 3 months after surgery. Make sure you take this medication with food.

Ultram (Tramadol): Used to treat moderate to moderately severe pain. It has two different mechanisms. First, it binds to the μ-opioid receptor. Second, it inhibits the reuptake of serotonin and norepinephrine. Take one tablet every 6 hours, alternating with the Oxycodone.

Senokot or Colace: Stool softner/laxative for constipation. Take 2 tablets twice daily starting 2 days before surgery until you are off your Vicodin or Percocet after surgery.

Aspirin (EC ASA): 325 mg tablet to be taken twice daily for 4 weeks after surgery to thin your blood to help against blood clots.

Cefadroxil: 500mg 1 tab by mouth for 14 days. This is an antibiotic to help prevent infection after your hip replacement.

Zofran (Ondansetron): To prevent nausea. You have 30 tablets with an additional refill if nausea persists.

Ambien (Zolpidem): To help with sleep. Sometimes your sleep cycle is disturbed after surgery and this will help with that. Only to be used after you are finished with the Oxycontin. You have a total of 7 tablets.

Prilosec (Omeprazole): Stomach protector. Take 1 tablet daily, in the morning, to protect your stomach. You should continue this medication for 3 months while taking the anti-inflammatory medication (Voltaren).

*****These medications are for post-operative use ONLY*****

What will Physical Therapy be like after discharge from the hospital?

In Home Physical Therapy (if applicable)

- Therapy should start the day after you leave the hospital
- In home therapy will be set up for 3 times a week until you are ready to progress into outpatient therapy. This may last anywhere from a couple of days to 2 weeks after surgery.

Outpatient Physical Therapy

- You are responsible for setting up your outpatient physical therapy visits. You will be given an outpatient physical therapy prescription the day of the class or at your follow up visit.
- You will go to outpatient physical therapy 3 times a week for 6 weeks or until you meet your goals
- Select an outpatient facility which is convenient for you. You may also want to work with a physical therapist you have worked with previously. If you need a recommendation, we will provide you with a list of facilities.
- You should progress yourself into outpatient physical therapy as soon as you meet one of the following criteria.
    - You have met your goals at home and are discharged from home physical therapy by your therapist.
    - You are no longer home bound (i.e. you return to work)
    - You are no longer taking narcotics. Once you are off narcotics you are allowed to drive, and then are able to drive yourself to physical therapy
    - You have transportation (i.e. a friend or family member to drive you to your physical therapy sessions)

What will Physical Therapy be like after discharge from the hospital?

A comprehensive physical therapy regimen during your hospital stay is crucial to your recovery. As soon as possible, we want you to try to lift your operated leg. Initially, you will have some discomfort with this exercise. After two or three leg lifts, the discomfort will decrease. Gaining muscle control to lift and move your leg will speed your recovery and help you to get in and out of bed safely and easily. Remember, regaining your mobility allows you to use the bathroom rather than a bedpan.

Regaining hip motion early prevents stiffness that might interfere with the way you walk and will help ensure the successful result we want for your hip. As soon as you have recovered from surgery enough to move about, you will be transported to the gym for more intensive exercises and activities. Your therapists know from experience how much to push you, and you are encouraged to work hard with them. Your physical therapy may be uncomfortable, but taking pain medicine before therapy allows you to get a good workout. Your rewards will be regaining motion and strength in your hip, the expedition of your recovery, and a return to your favorite activities.

After discharge from the hospital, you are encouraged to attend outpatient physical therapy several times a week. The activity of getting out of your house and going to a therapy center is part of your recovery. Therapy improves your hip motion, strength, and endurance. If you are not ready for outpatient therapy, your case manager will assist in arranging therapy in your home.

Goals to Achieve by 3 Weeks

1. Walk at least 2 blocks without an assistive device (Walker)

2. Independent with activities of daily living (showering, Dressing, etc.)

WHAT TO EXPECT AFTER SURGERY

You will have mild bruising and swelling initially (Day 1-7) that will start at the surgical site

Bruising and swelling are normal after surgery and vary from one individual to another

Bruising and swelling will continue to increase over the first two weeks after your surgery

Bruising may travel up as high as your groin area and will eventually move down to your toes

Expect swelling in your entire leg including your foot

WAYS TO DECREASE BRUISING AND SWELLING

WEEK ONE: RICE

R = REST

We want you to be up and moving but do this in moderation. We recommend you rest for the first 5-7 days after surgery. DO NOT OVERDO IT. Increased activity means increased swelling. By decreasing the swelling early you will recover quicker. We recommend small bouts of activity throughout the day. Get up and walk around the house a little bit every hour and a half that you are awake

I = ICE

Ice as much as possible the first week. Ice is a great anti-inflammatory and helps minimize the swelling. You may apply ice packs or ice massage over the hip, the quadriceps muscle (muscle located at the front of your thigh), the hamstring muscle (muscle located at the back of your thigh) and the calf.

C = COMPRESSION

The TED hose compression stockings provide compression and help minimize the swelling. Keep the stocking on during the day and take them off at night for the first 3 weeks after your surgery.

E = ELEVATE

Elevating your leg will help reduce swelling. To reduce significant amounts of swelling elevate your leg 4-5 times a day for 15-30 minutes each time. Do this with your ankle above your knee and your knee above your heart.

Week 2 and after:

Use heat:

You may start using heat to help decrease bruising. Place a hot pack/heating pad over the front and back of the thigh and on the calf muscle. Try heat 3 times a day for 20 minutes each time. Using heat will increase your flexibility and make exercising easier.

Alternate the heat and ice. Heat before you stretch/exercise and use ice after activity

What to expect after surgery

	Day 1	Day 2-3	Day 4-5	Day 5-7	Day 8-16	Week 3
Swelling/Bruising Ways to minimize swelling and bruising	Mild swelling/Bruising Use ice, wear TED hose during the day (off at night) and elevate leg	Increase in swelling/ Use ice, wear TED hose during the day (off at night) and elevate leg bruising	Swelling/bruising may increase or stay about the same as the two previous days Use ice, wear TED hose during the day (off at night) and elevate leg	Swelling/bruising may increase or stay about the same as the two previous days Use ice, wear TED hose during the day (off at night) and elevate leg	Swelling and bruising should be decreasing Alternate heat and ice, wear TED hose during the day (off at night) and elevate leg	Minimal swelling which will last for about 3 months Alternate heat and ice, wear TED hose during the day (off at night) and elevate leg
Physical Therapy/Activity	Focus on gentle range of motion with your physical therapist and use ice for swelling	Use ice and focus on gentle range of motion with your physical therapist. You may find that with the increased swelling, your motions decreases.	Use ice, focus on range of motion activities, increase walking distance You may find that with the increased swelling, your motions decreases.	Use ice, focus on range of motion activities, increase walking distance	Focus on range of motion exercises, initiate strengthening, and increase walking distance	Progress strengthening program.
Goal	Start home physical therapy		You should start walking without an assistive device	Start outpatient physical therapy	Initiate functional activities to return to work	
Pain Management	As directed when discharged	As directed with discharged Change Scopolamine patch	As directed when discharged	As directed when discharged Wean off Oxycontin		

TUCSON ORTHOPAEDIC INSTITUTE

If you have concerns/questions, please read the following information before calling the office.

What if my leg swells after surgery?
It is very common to experience swelling after surgery. Sometimes, you will not swell until several days after your surgery. Remember that your body is healing from the surgery and some swelling is normal. The more activities and physical therapy you perform, the more swelling you may experience.

But with that said, we do want you to remain active and participate in therapy. But, when sitting and resting, you can decrease the swelling by elevating your surgical leg above the level of your heart and using ice.

You should be alarmed if you have swelling for several days that is accompanied by redness and heat, or coolness in your surgical leg, or if the swelling does not resolve after elevating. If this is the case, please contact Dr. Goodman's office.

Will I have bruising after surgery?
Yes, you will have some degree of bruising after surgery, but everyone is different. Some will only experience redness around the incision; others will have bruising down the entire leg. Both are considered normal and will resolve over 10-14 days.

How much weight can I put through my leg after surgery?
Unless told otherwise in the hospital, you can put as much weigh as you can tolerate through your surgical leg immediately after surgery. The term is "weight bearing as tolerated." Your physical therapist will instruct you on how to use your crutches or cane in order to perform this properly.

What should I expect my activity level to be?
Every patient is different. Every day you should be increasing your activity level, but let your pain level and swelling be your guide. You will make 75 percent of your recovery in the first 6 weeks, and the remaining 25 percent will come within the next year.

At some point, most patients overdo their activities and therefore take a few steps back in their recovery. You may have increased swelling or discomfort if this happens. You need to become concerned if you cannot control your pain with rest and pain medications, or if you have progressive difficulty bearing weight through your surgical leg.

What if I am having problems sleeping?
Make sure that your pain is well controlled throughout the day. During the day be careful about taking naps. Try to plan your activities as near normal as possible. Also you can take the Ambien, as it is prescribed, if you are having difficulty sleeping. **You may only take Ambien once you are finished with the Oxycodone**.

What should I do to avoid constipation?
The most important thing to prevent constipation is hydration. You should start your stool softener two days before surgery and continue twice daily until you have a normal bowel movement or while taking narcotic pain medication. Stop the stool softener if you start to experience loose or watery stools. If you continue to have symptoms of constipation you can take Milk of Magnesia, which is a mild oral laxative, or use Magnesium Citrate, which his much stronger. In addition, you can also try Dulcolax suppositories or a Fleets enema. All of these medications can be bought over the counter at a pharmacy.

When can I shower or bathe?
You can shower the day after surgery. To ensure that your incision heals properly, we do not want you to bathe or get into a swimming pool for 14 days. If you have scabs on your incision after that time, you may not get into a swimming pool until it is healed.

How long do I have to wear the stockings?
You should wear them for 3 weeks. During the 3 weeks you must wear the stockings during the day, but may remove them at night. These should be worn on both legs after surgery. You will be issued an extra pair before you are discharged from the hospital.

What positions can I sleep in?
You may sleep on your back, or on either side. Your physical therapist will assist you initially into this position. Do not do it on your own your first time. The physical therapist will give you cues on how to do so safely on your own.

When can I restart the medications I was told to stop prior to surgery?
Usually as soon as you are discharged from the hospital, but check with your primary care doctor or us if there are any questions.

Now that I am no longer requiring narcotic pain medication, what can I take if I should experience discomfort?
You make take Tylenol or Extra-Strength Tylenol. Because you are already taking an anti-inflammatory (Voltaren), you may not take over the counter medications, such as Advil (Ibuprofen) or Aleve.

What should I do if I think my joint is infected?
As stated above, you will experience some bruising and swelling after surgery. In addition, you may notice small amount of yellowish or pinkish drainage. You should contact the office if you have a large amount of drainage that has saturated through your clothing, if the drainage is yellowish/cloudy or if you are running a consistent temperature of 101.5, or if you have a new onset of pain that is not controlled by your pain medication. These symptoms do not mean that you are infected, but are symptoms we should be notified of.

When should I take antibiotics? Who will give me the antibiotics? How long should I take the antibiotics?

You should take antibiotics before the following procedures:

- ANY dental procedure, including teeth cleaning
- Sigmoidoscopy/colonoscopy
- Any infection
- Tonsillectomy
- Bronchoscopy
- Liver biopsy
- Genitourinary instrumentation
- Prostate and bladder surgery
- Kidney surgery
- Vaginal exams and Gynecological surgery
- Barium enema

Please contact the office to obtain the antibiotic from Dr. Goodman. You will receive either Amoxicillin or Clindamycin, and the dosage is four tablets one hour prior to the procedure. **Do not schedule any of the above appointments starting 3 weeks before surgery and up until 3 MONTHS after surgery. This is a LIFELONG precaution.**

What about using a hot tub or whirlpool?
Because of the heat and bacteria in the water, we do not want you to use a hot tub or whirlpool for 6 weeks.

Why does the skin feel funny around my incision?
The nerves in the skin cross the front of the hip in an inside-out direction. When an incision is made down the front of the hip, these tiny nerves are divided and the skin on the outside will feel fuzzy or numb. This sensation will lessen with time and is normal for all patients with hip replacement surgery.

Why is my leg discolored?
You may develop some discoloration (like a bruise) in the leg. This is from bleeding that occurred shortly after surgery but did not drain completely into the drain that was removed the day after surgery. This discoloration, which may extend to the hip or ankle, will slowly disappear.

When can I get my hip wet?
Unless there is drainage from the incision, you may shower when you get home. In fact, some patients shower in the hospital prior to discharge. You may wash around the incision, but do not

scrub the incision. Water doesn't hinder the healing, but a strong soap could irritate the skin. Be sure to gently pat the area dry.

What about cocoa butter and vitamin E oil?
You can apply either of these to the incision if there is no wound drainage. One application per day, usually after bathing, is optional beginning ten days after surgery. Your skin will heal fine with or without these topical applications.

A stitch is sticking out. What do I do?
We often suture the skin from underneath to reduce scarring. The knot at the end of the stitch sometimes will protrude from the skin. Redness and a small amount of drainage may appear. Cleanse the skin with peroxide. If a piece of suture material appears loose, you may remove it. If you have increased drainage, redness, or pain, you need to notify our office.

When can I drive my car?
Usually after six weeks. Occasionally some patients are able to drive sooner. This may depend upon whether the car has automatic transmission, which hip had surgery, and whether the patient has good leg control. It is really up to your surgeon. You must be off of all your narcotic pain medicine.

How long will I have pain?
The surgical pain tends to resolve in a few days to weeks. You may continue to have some soreness and stiffness anywhere from six weeks to three months. This should disappear gradually with exercise and increased activity. If you develop pain after exercising with weights or walking without a walker or crutches, you may be overworking the hip. The following should help: using the walker or crutches, decreasing the amount of weight used during exercises, and periodically elevating your leg with ice on it. If the pain does not resolve in a day or two, you should contact your surgeon.

When can I go in the swimming pool?
Ordinarily, patients may resume pool activities after the six-week follow-up visit. Be sure to check with the surgeon at that time.

When to call Dr. Goodman's Office?

Fever above 101.5 consistently
Increased drainage or swelling
Pain not controlled by pain medication
Inability to put your body weight on your operative leg
Severe insomnia
Swelling in the foot or calf that is accompanied by coolness or decreased sensation in the foot
Confusion or Disorientation

SURGICAL COMPLICATIONS

Along with the advantages of hip replacement, the possibilities of complications exist. Complications may include infection, hip stiffness, nerve palsies, blood-clot formation, leg length inequality, hip dislocation, or fracture of the femoral bone during insertion of the stemmed prosthesis. The risks of these problems are small (approximately 3%), and they are usually correctable. We hope that by making you aware of these potential problems and by discussing them openly, you will have more confidence in our expertise and ability to avoid complications

The most common complication of any hip surgery is a deep venous thrombosis (a blood clot in the leg). This can happen to about 5% of patients treated with blood thinners and to more than 10% of untreated patients. To avoid this complication, we treat patients with Aspirin EC 325mg twice daily or some other blood thinner, pneumatic compression devices, and elastic stockings during hospitalization. These blood clots usually do not cause any symptoms and are diagnosed by a vascular scan done several weeks after surgery. If a blood clot is diagnosed despite treatment, we will continue the anticoagulation medication for 3 months or readmit the patient and start a new medication.

Dislocation, which occurs when the ball at the top of the femoral component comes out of the hip socket, is seen in about 1-2% of primary total hip arthroplasties and in about 5 to 10% of revision arthroplasties. Dislocations are treated initially without surgery, and most patients who dislocate never require further surgery. Preventative measures for dislocations and the treatment of dislocations have been discussed in other sections of this book.

Patients with arthritic hips often develop shortening of the affected leg. One of our goals with a hip replacement is to equalize leg-length as much as possible. While this is possible in more than 90% of our cases, it may not be feasible with large differences in leg lengths. In revision cases and in some primary cases, muscle and bone loss associated with revision surgery requires us to lengthen your leg to optimize the stability of your hip.

Infection occurs in less than 1% of all patients; however, when it does occur, it is serious. The implants must be removed for two to three months so that the infection can be treated with antibiotics. After the infection is cured, new hip components can be reimplanted with antibiotic cement in most cases. Nerve injuries occur in less than 1% of hip replacement patients and usually result from scar tissue from previous surgeries forming around the nerve. Fractures during surgery also occur in less than 1% of patients. A fracture is more common in revision surgery when bone loss has occurred or a well-fixed implant must be removed. Treatment can range from restricted weight bearing, wearing a cast, or surgery, depending on the nature and location of the fracture.

Risks from anesthesia also exist and vary for different patients and types of anesthesia. We encourage patients to discuss their options with the anesthesiologist on the day of surgery. We believe that well-informed patients approach the surgical procedure and postoperative experience with greater enthusiasm and less apprehension. By discussing your procedure, its

risks and benefits, as well as our techniques, alternative treatments, and expected outcomes, we hope to reassure you that we are committed to your well-being.

This list covers the most common complications associated with hip replacement surgery. We hope that in discussing your procedure with you – its risks and benefits, our techniques, alternative treatments, and expected outcomes – *w*e can assure you we are providing the best care possible.

Risks of Joint Replacement Surgery

As with anything we do in life, there are risks involved with total joint surgery. We use the most up-to-date information, surgical techniques and instruments, and joint replacement implants to help our patients achieve the most positive results we can. We read and prepare extensively for our surgeries, spend countless hours learning how to be the best doctors and surgeons we can be in order to make your experience the most positive one that it can be so that your joint replacement is excellent. Despite all of our efforts, preoperative planning and preparation, bad things sometimes happen to good people.

I have been through the preoperative education for my upcoming total joint replacement and have had my questions regarding the procedure, its risks and benefits, as well as other surgical and non-surgical treatment options, answered to my satisfaction. I understand that the procedure may not alleviate my pain or return my range of motion. I also understand that there are risks associated with surgery including, but not limited to, problems with anesthesia (nausea, confusion, memory loss, heart attack, stroke and death), infection, dislocation, differences in leg length/angulation/rotation, fracture of bones, loosening or failure of implants, hematoma (blood within the hip or knee) which may require surgical drainage, blood clots, pulmonary embolism, nerve injury (foot drop), and blood vessel injury. I realize that the implants may need to be removed or replaced if they wear out or if there is evidence of infection. I understand that scarring along the incision is normal and that there may be numbness or tenderness around the incision. I understand that blood loss can occur during or after surgery which my require transfusion and that with this there is the risk of transfusion-associated diseases.

The rehabilitation program has been explained to me and I realize the restrictions on activity during the rehabilitation period and for the life of the implant. I understand that bracing may be necessary to protect the joint. I am able to, and will, comply with all recommendations regarding my activity.

Name:____

Signature:____ Date:____________________

Hip & Knee Replacement Program
Enrollment Agreement

Welcome to the Tucson Orthopaedic Institute Hip & Knee Replacement program.

Our goal is to optimize your recovery. Your surgeon prefers to send you home with the help of family and friends and as soon as it is safe. This means you'll likely go home the same day or after a one night stay in the hospital. This limits your risk of infection. We do not want to send you to an inpatient rehab or skilled nursing facility unless it is medically necessary, **and** your insurance allows it.

If your insurance company believes that you do not need to go to a facility and you still would like to go, you will be expected to pay for it. Your insurance will not pay for your stay.

In order to make sure you have the best possible experience, we ask that:

- You attend a mandatory Joint Class. This class will tell you what you need to know about your surgery and hospital stay. It will also cover what to do once you leave the hospital. To register, please call (520) 324-2075. *You do not need to come to Joint Class if you have come to the class within the last year.*
- You acquire a front wheeled walker prior to surgery and bring it the day of surgery. Four-wheel walkers are not acceptable.
- You schedule your first week of physical therapy appointments (three appointments). The first appointment should be within two days after your surgery.
- You follow the instructions provided in the Hip and Knee Replacement book
- Your Coach is able to assist you until you are able to safely get out of the house on your own during a potential emergency and be able to go to the bathroom without any help. *If it seems that there will not be someone to take care of you once you are discharged, your surgery will be moved to another day until someone has been identified and we have verified that they will be available to assist you.*
- Your Coach will have the body strength to take care of you.

My Coach will be:____
Relationship:____
Cell phone:____
Home phone:____
Work phone:____

Signature:____

About Dr. Goodman

Dr. Goodman was born in Tucson, Arizona. His father was a Judge Advocate General (JAG) in the United States Navy, before becoming an intellectual property attorney at The University of Arizona and Children's Hospital of Los Angeles. His mother graduated from Brigham Young University with a degree in family studies, which helped her manage Dr. Goodman and his four siblings growing up.

Dr. Goodman graduated *cum laude* from The University of Arizona with a Bachelor of Science (BS) in Chemistry, a Bachelor of Arts (BA) in Biochemistry, and a minor in Mathematics and Physics. While in college, Dr. Goodman was a four-time varsity letter winner in football, and was named to the 2002 All-Pac 10 conference academic team.

Following his undergraduate education from Arizona, Dr. Goodman went on to graduate in the top 5 of his medical school class at The Lake Erie College of Osteopathic Medicine in Erie, Pennsylvania. He earned the F. Edward Hebert Armed Forces Health Professions Scholarship and was commissioned into the United States Army. After graduating number 5 in his class with academic honors from medical school, Dr. Goodman completed his five year orthopaedic surgery training in the Army's premier orthopaedic surgery residency program William Beaumont Army Medical Center/Texas Tech University Health Sciences Center in El Paso, Texas. A major emphasis of his training in residency was on fracture and trauma management. In his final year, Dr. Goodman served as the Academic Chief Resident and finished as the Orthopaedic Surgery Residency's Distinguished Honor Graduate.

Upon completion of residency Dr. Goodman was awarded the only position in the US Army for fellowship training in adult reconstruction and total joint surgery. Dr. Goodman completed his fellowship training at one of the Nation's premier total joint fellowships at the Anderson Orthopaedic Institute in Alexandria, Virginia. Under the guidance of world renown total joint surgeons, Dr. Goodman mastered skills in minimally invasive partial and total knee replacements and the muscle sparing anterior total hip replacement.

After 12 years on active duty with the US Army, Dr. Goodman joined the staff as Associate Professor of Orthopedic Surgery at Banner- University Medical Center at the University of Arizona, after which he joined the Tucson Orthopedic Institute.

Dr. Goodman has published multiple scientific articles in peer-reviewed journals including orthopaedic surgeries premier literature source, The Journal of Bone and Joint Surgery, the Journal of Arthroplasty and the Journal of Trauma. He has authored book chapters and continues to be actively involved in clinical research. Some of his areas of interest are postoperative pain control, postoperative complications and management of the infected total joint replacement.

Dr. Goodman is married and has seven beautiful children. In his spare time Dr. Goodman enjoys the outdoors including hiking, camping and playing sports with his family.

Useful Websites

Dr. Goodman's Personal Webpage

www.drgensgoodman.com

Tucson Orthopedic Institute

https://www.tucsonortho.com/doctors/gens-p-goodman-do/

American Academy of Orthopaedic Surgeons

www.aaos.org

http://orthoinfo.aaos.org/

American Association of Hip and Knee Surgeons

http://www.aahks.org/