WHOLE HEALTH

JOINT REPLACEMENT INSTITUTE

HIP AND KNEE REPLACEMENT HANDBOOK

www.wholehealthjri.com

1.833.HIP.KNEE

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JOINT REPLACEMENT INSTITUTE

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Main: 1.833.HIP.KNEE

Local Phone: 814.333.7109 Fax: 814.333.7108

Total Joint Patient Hotline (24/7): 724.646.0400 (extension = 0)

Edgewood Surgical Hospital (Transfer, PA)

Whole Health Joint Replacement Institute, is a state of the art, multi-disciplinary system of healthcare providers who are dedicated to providing an unparalleled experience for patients undergoing major hip or knee replacement surgery. The process involves a large team including yourself, your surgeon, internal medicine team, anesthesia team, physician's assistants, ortho-techs, the operating room team, nurses, physical therapists, case managers, etc. The process is designed to better serve you and allow the team to provide you with a comfortable environment that gives you top-notch surgical care and aftercare. It is crucial for you to participate and embrace in this program to obtain maximal benefit and functional recovery. The mandatory components of this program are listed below and are also provided in a separate checklist that you will receive from our office when you schedule your surgery.

You will be scheduled to have Pre Admission Testing (PAT) 2-3 weeks before your surgery and will also be required to have medical clearance/optimization from our board certified Internal Medicine specialist team. The same Internal Medicine team will follow you through the peri-operative period for consistent medical management and optimization.

Edgewood Surgical Hospital will call you the day before your surgery (surgeries scheduled for Monday will receive a call on Friday of the week before) between 12-2 PM to determine the required arrival time on the day of your surgery. You will also receive a call from your surgeon, or one of their assistants the day before surgery to confirm your arrival time and answer any remaining questions you may have.

We look forward to assisting you in your road to recovery and the decision to help improve the quality of your life. Do not hesitate to contact our office with any questions you may have at 1.833.HIP.KNEE or 814.333.7109

Pre-Op Checklist Requirements:

- Pre-Op education class (Dates/times confirmed with our office)
- Obtain medical clearance from the Whole Health Internal Medicine Team within 2-3 weeks of the scheduled surgery
- Begin your exercises provided in this folder prior to your surgery
- Confirm your first post-operative visit (2-3 weeks after surgery unless otherwise notified)

To be done the day surgery is scheduled in clinic:

- Case Scheduled (Date:_____)
- Procedure: _____
- Total Joint Educational Material Distributed
    - Start Pre-Op exercises now
- Total Joint Education Class Attendance/RSVP Confirmed (Date:_____)
    - MANDATORY to attend a pre-op education class
- 1st Post-Op appointment scheduled @ time surgery is scheduled (Date:_____)

To be done between the day surgery is scheduled and the day of surgery:

- Pre-Surgical Testing and Medical Clearance appointment (Date:_____)
- Check List of Things to bring to hospital for surgery:
    - Loose fitting Shorts (for knee patients) or elastic pants (for hip patients). NO JEANS
    - Rubber soled shoes/tennis shoes
    - Medications (as instructed)
    - Sequential Compression Devices (SCD'S), If Purchased
- Pre-Op Call from Surgeon or assistant the day before surgery
- Read the Patient Educational Handbook and/or watch the educational video

To be done after surgery:

- Post-Op follow-up call 1 week after surgery (if you are not called from our office in 7-10 days after surgery, please call 1.833.HIP.KNEE and speak with one of our assistants)
- Home SCD's 18 out of 24 hours per day
- Icing Unit (you should ice the involved joint as much as comfort dictates)
- Home exercises
- Call with any problems or concerns that are not addressed on the Discharge Instruction Sheet

A Positive Approach leads to a Positive Experience

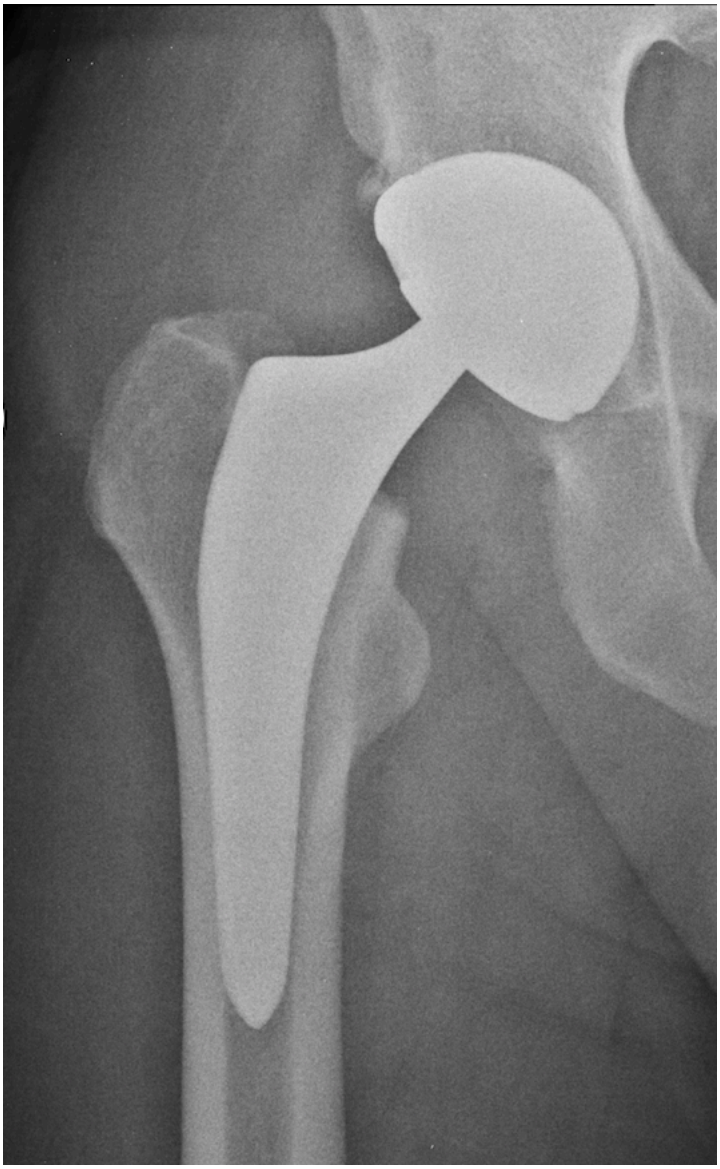
Being prepared for a hip or knee replacement requires physical, mental and emotional readiness. Although pain after surgery is an anticipated reality, the thing to keep in mind is that this is surgical pain/soreness, which is temporary and should resolve with time. It is important to remember that the perception of pain is a completely unique experience and is different for everyone. There is no "normal" duration or degree of pain after surgery. The good news is that we as clinicians have gotten very good at anticipating this expected pain and treating it before it even occurs. We use a state of the art multi-modal pain protocol that is very effective at keeping you comfortable after surgery.

One of the most important things to focus on after the operation is to use the joint by walking and doing the necessary exercises as instructed. This activity will significantly improve your symptoms of pain, swelling and stiffness. Each patient recovers differently and the therapists will help tailor your exercise plan to best suit you and your needs/goals.

It is also important to remember that your hospital stay will be short and the vast majority of your recovery will occur after you go home in the weeks and months to come. A specific plan for you will be outlined before surgery. This may include same-day surgery, one overnight stay or another plan. You must understand that although there is expected pain after surgery, you are not sick and do not need a long stay in the hospital. It is much better for you to get back to your home environment where you are familiar. You will be more comfortable, will sleep better and be more independent with activities of daily living (ADL's), which is crucial for an exceptional functional recovery.

In summary, you must take a very active role in your recovery and realize that <u>your final outcome and overall satisfaction with your new joint is largely based upon you</u> following your surgeon's instructions and working hard. Trust and have faith in the program that has been developed for you and this should lead to a very successful and long-lasting result in the majority of patients.

Total Hip Replacement



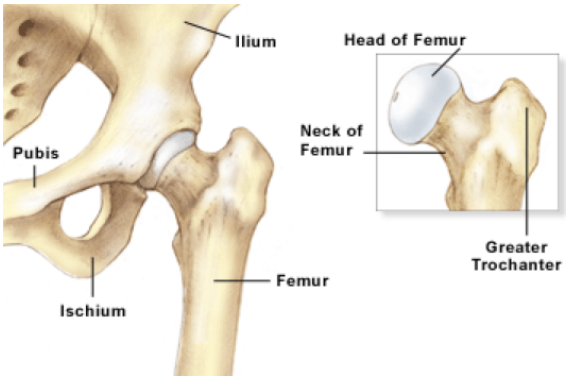
Total Hip Replacement/Arthroplasty (THA)

Indications for Surgery:

- Pain which affects your activities of daily living
- Difficulty sleeping due to pain
- Deformity of the hip
- Stiffness or loss of motion
- Certain types of hip fractures
- Failure of conservative treatments (medications, injections, therapy, activity modification, attempts at weight loss, walking aids, etc.)

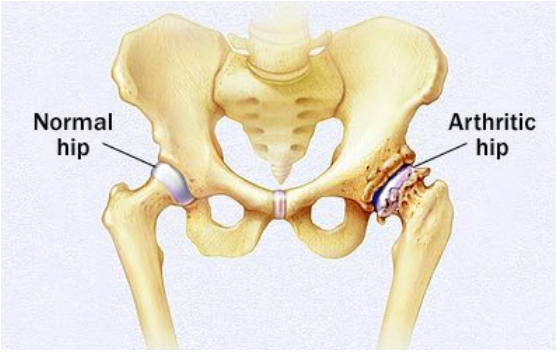
Normal Hip Anatomy:

The hip joint is a ball and socket joint that typically moves smoothly and freely without pain or stiffness. This motion is very important for activities such as walking, stair-climbing, bending/squatting and even tying our shoes. The hip joint is made up of the top portion of the femur bone called the femoral head (ball) and the acetabulum (socket), which is part of the pelvis bone.



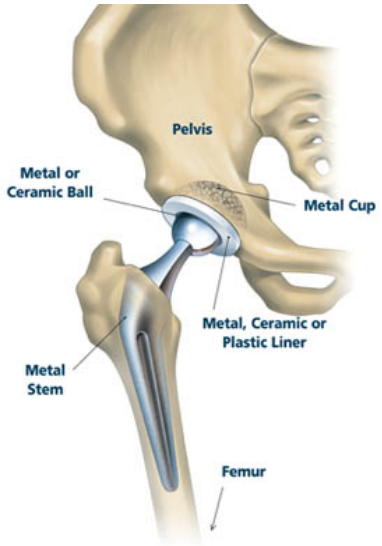
Hip Anatomy with Arthritis:

Both the femoral head (ball) and acetabulum (socket) are covered with articular cartilage (shock absorber/cushion). Over time or after injury, this layer of cushion can wear out just like the tread on your car tire, leading to “bone on bone” contact or arthritis. At a certain point, the “bald tire” may need to be replaced much like an arthritic joint may need a new joint to allow it to function and be relatively pain free.



Hip Anatomy after a Total Hip Replacement:

A hip replacement consists of several implant components: the cup, the stem and a new ball and plastic liner. The cup is made of metal and will be placed inside the pelvis bone to create a new socket. It is sized and positioned to match your personal anatomy. The stem is also made of metal and goes inside the femur bone and will be sized and positioned to match your normal bony anatomy. The ball is either made of metal or ceramic and will articulate with a new plastic liner inside the metal cup. Multiple sizes and shapes exist and your surgeon will determine which implants are most appropriate for your case.



Total Hip Surgical Technique/Approach:

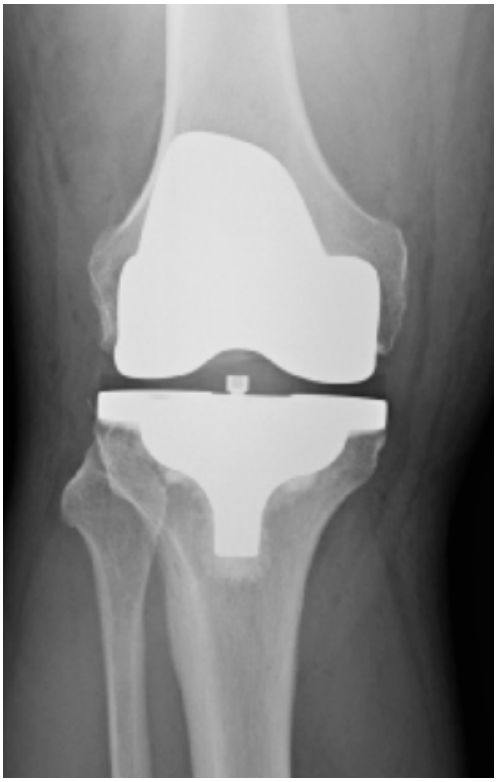
There are multiple surgical approaches that can be used to perform a total hip replacement. Traditional hip replacements are done using either a posterior or lateral approach where the incision is placed on the side of the hip and require large and powerful muscles to be cut to gain necessary exposure of the bone to do the case. Although these approaches both lead to very successful/predictable results, they both require extensive physical therapy to re-train these muscles as well as hip precautions (a set of rules and positions to avoid after surgery) to help protect the hip from dislocating for several months until the hip tissue and muscles scar in.

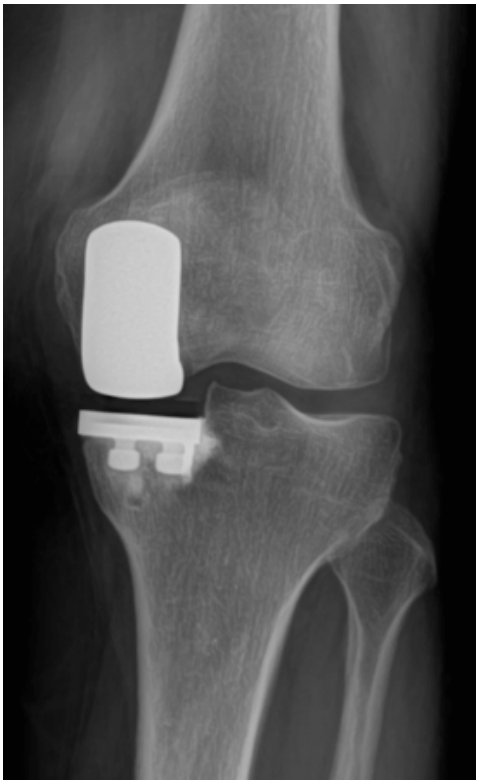
An alternative approach that is becoming more commonly sought out is a Direct Anterior (D.A.) approach, which is a minimally invasive approach that does not cut any muscles or tendons. It allows for a much quicker functional recovery with much less pain, less blood loss, more accurate implant positioning/sizing and leg length restoration.

As with any technique or approach, there are multiple advantages and disadvantages, which are outlined below:

	Posterior Approach	Lateral Approach	Direct Anterior Approach
Advantages	▪ Wide exposure ▪ Technically relatively easy ▪ Most common ▪ Extensile ▪ Easier prep/drape/positioning	▪ Wide exposure ▪ Technically relatively easy ▪ Extensile ▪ Easier prep/drape/positioning	▪ Minimally invasive ▪ Much quicker post-op ▪ No muscles cut ▪ Accurate component size position ▪ Accurate/easier leg-length restoration ▪ Real-time fluoroscopic feedback ▪ Inherently stable/extremely low dislocation risk
Disadvantages	▪ Highest dislocation risk (2-6%) ▪ Damage a lot of muscle ▪ Leg-length restoration difficult ▪ More difficult to properly size and position implants	▪ Most muscle damage (post-op limp) ▪ Leg-length restoration difficult ▪ Intermediate dislocation risk ▪ More difficult to properly size and position implants	▪ Extremely difficult/ challenging from a technical standpoint (steepest learning curve) ▪ X-ray exposure ▪ Special table/equipment necessary ▪ Higher risk of anterolateral thigh numbness ▪ Harder to extend exposure ▪ More demanding prep/drape/positioning

Total and Partial Knee Replacement





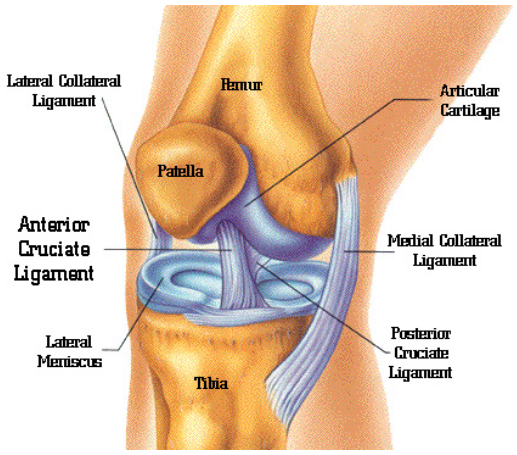
Total Knee Replacement/Arthroplasty (TKA)

Indications for Surgery:

- Pain which affects your activities of daily living
- Difficulty sleeping due to pain
- Knee swelling/inflammation
- Deformity of the knee
- Stiffness or loss of motion
- Certain types of hip fractures
- Failure of conservative treatments (medications, therapy, activity modification, attempts at weight loss, walking aids, etc.)

Normal Knee Anatomy:

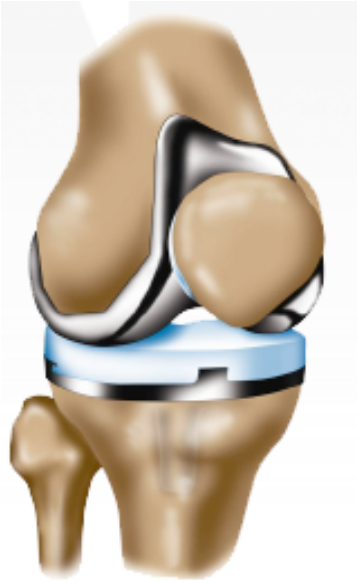
The knee is the largest joint in the body and is created by three bones: the femur (thigh bone), the tibia (shin bone) and the patella (knee cap). The knee is a very complex joint that flexes and extends (bends/straightens), translates (slides) and rotates.



Knee Anatomy with Arthritis:

The ends of all of these bones are normally covered in a nice thick layer of protective articular cartilage (cushion/shock absorber). Over time or after injury, this layer of cushion can wear out just like the tread on your car tire, leading to “bone on bone” contact or arthritis. At a certain point, the “bald tire” may need to be replaced much like an arthritic joint may need a new joint to allow it to function and be relatively pain free.

Knee Anatomy after a Total Knee Replacement:



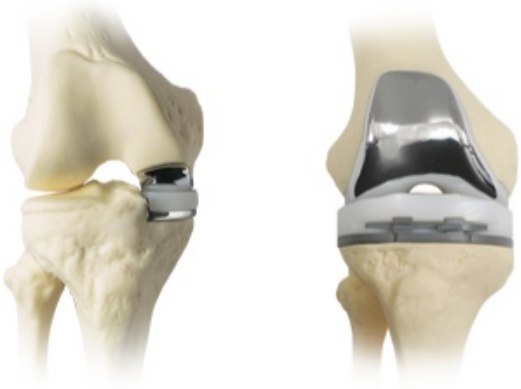
A knee replacement consists of a metal femoral component or "cap" that covers or resurfaces the end of the femur, a metal baseplate with a short stem/keel that goes on the top of the tibia, a plastic spacer/insert that goes between the femoral and tibial components and a plastic button that goes on the back side of your own patella (knee cap). The components are accurately sized and positioned utilizing custom, single-use, patient specific plastic molds that will be used during the case. By accurately positioning and aligning these components, the knee should feel and function more normal. In addition to this, accurate alignment should help the implants to last much longer than a knee done with less accurate conventional alignment, just like a mal-aligned tire on your car may wear out much quicker than a well-aligned tire.

Partial/Unicompartmental Knee Replacement ("Uni"):

A unicompartmental knee replacement is an alternative to a total knee replacement when only one compartment of the knee needs replaced. The knee joint can be divided into three separate compartments: the medial (inner) compartment, the lateral (outer) compartment, and the patellofemoral (knee-cap) compartment. If only one of the three compartments is affected, then a "uni" could be a good option where a metal femoral and tibial component are placed along with a plastic spacer between these metal components.

Some of the advantages of a "Uni" are:

- More "normal" feeling knee than a total knee
- Less invasive than a total knee with less pain
- Quicker recovery than a total knee (typically half the time)
- Less chance of stiffness and other complications compared with a total knee



"Uni" vs. Total Knee

Potential Risks/Complications from Hip and/or Knee Replacement Surgery:

As with any surgical procedure there are potential risks and complications. Although these are rare, it is important to be aware and informed of these potential risks/complications:

- Pain
- Scar
- Bleeding
- Infection
- Fracture
- Stiffness
- Numbness around the hip and/or knee incision
- Blood clot
- Need for blood transfusion
- Dislocation
- Leg length inequality
- Component loosening
- Prosthesis wear/breakage
- Damage to neurovascular/musculoskeletal structures (blood vessels, nerves, muscles, tendons, bones, etc.)
- Failure of procedure
- Need for future procedure
- Reaction to medications/anesthesia
- Death

Preparing For Your Surgery

Confidentiality

Whole Health JRI and Edgewood Surgical Hospital are dedicated to keeping your medical information confidential. All consents will be obtained with your written authorization. Our privacy policies will be shared both in the office setting as well as during your hospital admission.

Pre-Admission Testing and Medical Clearance

The goal of pre-admission testing is to assess your physical health ensuring you are in the best medical shape to go through surgery safely. This will be scheduled usually 2-3 weeks before your surgery and will consist of you meeting with a representative from the Edgewood Surgical Hospital Anesthesia Team as well as with the Whole Health Joint Replacement Institute board certified Internal Medicine specialist team.

Please make sure to have a list of all medications and dosages to discuss during this interview. Some medications will need to be stopped or adjusted prior to surgery, which will be discussed at this appointment. These may include blood pressure medications, diabetic medications, and blood thinners. Blood thinning medications may include Coumadin, Lovenox, Pradaxa, Plavix, Xarelto, and NSAIDs (i.e. ibuprofen, Aleve, Motrin).

Immunosuppressant medications (i.e. methotrexate) will also need to be stopped prior to the surgery and we will notify you of when you should stop these as the time periods differ depending upon the medication. These will be resumed approximately six weeks after surgery. Please discuss any blood thinning medications and/or immunosuppressants with the JRI team as well as with the Internal Medicine specialist that will be doing your pre-operative clearance.

Preliminary blood work is also necessary for surgical planning. These often include labs, electrocardiogram (EKG), and/or stress testing. You will be provided a cleansing soap to use prior to your surgery with instructions on how to use it.

Surgery Date/Time

Once you decide with your doctor to proceed with surgery, the Whole Health medical staff will help you schedule all necessary appointments prior to leaving our office. Information about the surgery will be given to you and any questions you have will be answered at this time by the Whole Health team. Please make sure to write down and ask any questions you may have. If you think of anything after leaving our office we encourage you to call and speak with our team to answer your questions prior to surgery.

You will be given information for starting the pre-admission process at least 2-3 weeks before your surgery. You will receive a call from Edgewood Surgical Hospital to inform you of your arrival time.

You will be asked to arrive at the hospital **several hours before** your scheduled surgery time. There is always a chance scheduled times will change due to cancellations; however, you will be made aware ahead of time if this were to happen.

You will be asked to sign a surgical consent form prior to your surgery. Please read this carefully and ask any questions you may have. This consent is to inform you of the procedure as well as risks, benefits, and other options. Make sure you understand the information as you are an important part of the surgical process. By signing this form, you are indicating that you understand and accept these potential risks and complications.

Preventing Infection

There is always risk of infection when undergoing any surgical procedure. To minimize this risk, there are steps you can take:

- Take a shower the night before as well as the morning of your surgery (please use the special soap provided to you and follow the instructions carefully).
- Do not apply any lotions, oils, creams, or perfumes for 1 week prior to surgery. We actually want the skin on your incision site to be dry.
- Wash your hands frequently with soap and water or waterless hand sanitizer. Encourage your friends, family, nurses, and medical staff to do the same.
- Gaining good control of your diabetes and high blood pressure as well as not smoking can greatly lower your risk of infection and promote healthy healing.
- You will be asked to perform deep breathing exercises after surgery to prevent pneumonia. Standing up and walking as much as you can tolerate also helps prevent this.
- If you smoke or use any tobacco products, minimizing or eliminating these will aid in decreasing your healing time.
- ***Tobacco products should not be used for 3 weeks prior to surgery and at least 6 weeks after surgery as they significantly delay wound healing and increase the chance of infection.***

Preparing For Your Hospital Stay

What To Bring To The Hospital

It is important to bring an updated list of medications and dosages with you to review with the medical staff prior to your surgery. Bring your driver's license, insurance card, and any other information you may need. To make your brief post-operative hospital stay as comfortable as possible, you may bring toiletries from home.

If you are having a knee replacement, you should make sure to bring shorts to wear. Pants with elastic waistbands are important for total hip replacements. Bring athletic or tennis shoes to wear. Please bring SCD's (if purchased), spanx (if hip patient), and medications (as instructed).

Getting Home Safely and Comfortably

Home Safety

After your surgery, it is important to make your home as safe as possible. You may need items including a walker or cane to help with walking. This may be discussed with you at your pre-operative visit. You may need a prescription and/or authorization from your insurance company for medical equipment.

You will be placed on a blood thinner (typically Aspirin) and leg pumps (SCD's = sequential compression devices) after your surgery to prevent blood clots. You will also have a form of icing therapy specific to the procedure you had performed. You will be instructed on how to use the leg pumps and icing therapy unit by one of the JRI team members prior to surgery and while in the hospital, the nursing staff will help you with placement of the device.

Prior to coming in for your surgery, it is important to make your home as safe as possible for your return. If you have a two story home, you may need to create an area on the first floor (i.e.: "Home Base") that you can spend the majority of your time in. Stairs are allowed as tolerated as long as you feel safe and comfortable but they should only be used as much as necessary for daily living. Make sure you have handrails on your stairways. Keep a phone nearby in case of emergency and clear any obstacles in your walking path that may cause you to trip or fall.

Getting Home

After your surgery, you will not be allowed to drive until your doctor gives you permission. This is important in order to keep you and those around you safe until you achieve a certain amount of healing and comfort level with your total joint replacement and your "brake to gas" reaction times have normalized. Please make arrangements with friends or family for a ride the day of your discharge. Have a friend or family member stay with you for the first 5-7 days after surgery to help your recovery.

Activities of Daily Living (ADL's) at Home

After your joint replacement surgery, getting up and moving as soon as possible is extremely important. You will be seen by a physical therapist while in the hospital to help you work on mobility and performing normal activities of daily living including walking, stairs, getting in and out of bed as well as a car, and using the restroom. You may need to use a walker or cane throughout your recovery and your physical therapist will show you how to use these appropriately.

You will also be guided through exercises to strengthen your muscles and get you on the road to recovery. It is normal to experience stiffness, swelling, and soreness after your surgery. Physical therapy exercises and icing will help return you to your normal activities faster.

Make sure to discuss with your physical therapist what type of shower you have in order to help prepare you for using yours. It is important to keep your wound clean without submerging it in a bath, pool, or hot tub for at least 6 weeks after surgery. Showers or sponge bathing are recommended for your post-operative period and we recommend trying to keep the dressing as dry as possible.

You will be asked to keep the special bandage placed in the operating room in place for 2 weeks after surgery. After 2 weeks, you may remove the dressing and allow soap and water to run over it during showers. A light and dry dressing can be used after the initial dressing is removed for hips for the next several weeks. Knees typically do not need any dressings at this point but dry dressings can be worn if preferred. Your surgeon will discuss further wound care with you prior to being discharged. For the first week or two following your surgery, have someone present to help you with bathing for safety purposes.

Your Hospital Stay

The Day of Surgery:

- On the morning of surgery, and once you arrive at Edgewood Surgical Hospital, use the front entrance and turn right to check in
- You will need to have your driver's license and insurance card with you to register
- You will change into a hospital gown and an IV will be placed
- You will see your surgeon or dedicated assistant to mark the appropriate surgical site.
- Your family will be able to join you in the Pre-Op area once you are changed and you will speak with your surgeon as well as the Anesthesiologist to discuss anesthesia options
- You will be given medications in the Pre-Op area to help you relax and treat the anticipated pain
- General anesthesia is the most-commonly used anesthetic for both hip and knee procedures.
- You may also have specific pain-reducing blocks in the involved leg for certain procedures (typically just knee patients).
- The Operating Room Nurse will meet you at this point prior to going back to the Operating Room (OR)
- Once all of your questions are answered, you will be taken back to the Operating Room for your surgery and your family will be escorted back to the waiting room
- Once back in the Operating Room you will meet the rest of the OR Team and the Anesthesia team will begin administering IV medications
- After the operation you will be taken to the recovery room until you are alert and stable enough to be discharged or transferred to your hospital room
- Your surgeon will come out to the waiting room to talk with your family/friends in a private consultation room after the operation to update you on how everything went and when they will be able to see you, which will be in your hospital room (typically 1-2 hours after the operation)
- The goal is to get you up and walking the day of surgery with a walker and under Physical Therapy supervision and sitting in a chair with dinner

Post-Op Day #1 (for patients staying overnight):

- Your surgeon and his Physician Assistant (P.A.) will see you the morning after surgery typically between 7-7:30 am to make rounds.
- The hospital therapists will work with you to instruct you on the following:
    - Necessary home exercises
    - Gait training with a walker/cane in the hallways
    - Teach you how to navigate stairs
    - Teach you how to do the necessary activities of daily living (showering, getting in and out of bed, etc.)
- If you are spending the night, you will be discharged the day after surgery in the mid-morning once you have had adequate physical therapy sessions and you have met the necessary goals for discharge.

The JRI Patient Care Team:

Through the Whole Health Joint Replacement Institute (JRI) we pride ourselves on providing you exceptional, first-class service for both you and your family. The JRI Team consists of several medical professionals from many different medical sub-specialties that have come together to collaborate and lend our different areas of expertise to ensuring your utmost satisfaction and superb clinical outcome.

The ultimate goal of this program when it was developed was to allow you to regain your ability to enjoy life to its fullest and give you back an exceptional quality of life. We want to get you back to participating in the activities that you enjoy with minimal restrictions. While you are the most important member of our healthcare team, be assured that you are not alone and there are a number of outstanding medical professionals that will be helping you on your road to recovery.

Team Members:

- **Surgeon:** Your surgeon performs the procedure and directs your care both before and after. He/she is the "captain of the ship".
- **Physician Assistants (PA):** The PA's that work with your surgeon will be a critical liaison between you, your surgeon and your aftercare. They are the "second in command" and will help coordinate key aftercare plans/protocols.
- **Anesthesia Providers:** The Anesthesia team consists of Anesthesiologists and Certified Registered Nurse Anesthetists (CRNA's). They will be the ones to discuss your anesthesia options for both during and after the procedure. They are critical members in assuring a safe surgical experience with adequate post-operative pain control.
- **Internal Medicine (IM):** These board certified physicians will be the same physician(s) that you saw pre-operatively as well as while in the hospital after the surgery. This consistency helps to reduce confusion among providers and they will be responsible for managing any non-orthopedic conditions (i.e.: blood pressure, blood sugars, etc.)
- **Operating Room Team:** This team consists of a Registered Nurse (RN), a Surgical Technologist and other surgical professionals (Ortho Techs) who will help assist in your overall care during your time in the operating room.
- **Pre-Operative and Post-Anesthesia Care Unit (PACU) Team:** This group of individuals consists of Registered Nurses (RN's) and other skilled technicians that will help with your pre-op preparation and post-operative care and comfort.
- **Case Manager/Social Worker:** These individuals will help with any disposition planning needs, medical equipment needs and any other necessary components to your care upon being discharged from the hospital.
- **Physical Therapy Team:** This team consists of Physical Therapists, Occupational Therapists and their assistants that will help instruct you on the necessary daily exercises to help you regain your strength, mobility, range of motion and balance. They will also help to teach you safe walking guidelines as well as helpful tips for moving around your home in a safe and effective way.

Anesthesia Options:

The anesthesia team will be providing you with medications to control pain and consciousness during surgery. The two types of anesthesia used during surgery are *Regional vs. General*.

Regional (Spinal) Anesthesia: a form of anesthesia that uses medications that affect the nerves below your waist to essentially "numb" you so that you will not feel pain during or for a period after your surgery. IV sedation will be given to you during the administration of the regional or spinal anesthetic as well as during the procedure to help keep you sedated but breathing on your own. The use of a regional anesthetic helps to reduce the amount of pain medication required after the surgery.

General Anesthesia: a form of anesthesia in which the patient is unconscious during the procedure requiring a ventilator for breathing purposes, this may require a breathing tube to be placed during surgery. Specific pain-numbing blocks or injections are typically used to accompany general anesthesia to help control post-operative pain.

Note: The anesthesia team will discuss these options with you in detail along with the risks and benefits of each type. Please reserve questions regarding anesthesia to the anesthesia team.

The Post-Anesthesia Care Unit (PACU):

You will be transferred to the PACU after your surgery. The PACU nurses will help to take care of you during this phase of your recovery, which often lasts for several hours. They will help to keep you comfortable along with any other needs you may have at this point. Your family/family will not be allowed back into the PACU, but will rejoin you once you have been transferred to your private hospital room.

Patient Room:

The remainder of your brief hospital stay will occur in your hospital room. Depending upon what time you make it to your room, the physical therapists may or may not see you and work with you the day of surgery, but the majority of the patients will be up and walking the afternoon of surgery and sitting in a chair with dinner.

Services while on the floor:

- Sequential Compression Devices (SCD's):
- You will be wearing your ambulatory sequential compression devices (SCD's) throughout your entire hospital stay. These are important to wear for DVT prevention. You are to wear these 18 out of 24 hours a day for the first 3 weeks after surgery.
- Icing/Compression Device:
    - You are to wear this as much as comfort dictates to help reduce pain, swelling and inflammation. We recommend that you wear this as much as possible and to even sleep with it for the first several weeks, particularly for knee patients, as they tend to have more pain and swelling than hip patients.

- Incentive Spirometer:
    - It is recommended to use your incentive spirometer 10 times every hour while awake along with doing deep breathing and coughing exercises to help ventilate your lungs fully as you won't be as active after surgery. This helps to prevent conditions such as post-op fever and pneumonia.

Diet:

After surgery, it is important to keep your diet simple and bland. You will start with ice chips and slowly advance to clear liquids and then solids. Is important to slowly advance your diet while your stomach is "waking up" to avoid nausea and vomiting which is common a day or two after surgery secondary to the anesthetics and medications you will be taking for pain control. It is also important to try to avoid taking pain medications on an empty stomach for similar purposes.

Once you get to your room, you will be given a menu to choose your daily meals from. Please notify the dietary team and/or your nurse of any special dietary restrictions or allergies.

Pain Control:

Pain after surgery is an absolute certainty, but our job as the medical team is to help minimize your pain and keep you as comfortable as possible. You will be asked to "rate" your pain on a number scale to help objectify or measure your level of pain. It is important to understand that pain is a completely subjective sensation and it is very difficult to accurately measure and objectify. Every patient has a different pain threshold or ability to deal/tolerate pain.

The Whole Health JRI team, in collaboration with the anesthesia team at Edgewood Surgical Hospital, have adopted a multi-model pain protocol with several different medications and modalities to help minimize your post-operative pain and discomfort. Along with controlling your pain, this protocol also implements other medications to help minimize some of the common unpleasant side effects (i.e.: nausea, vomiting, constipation, urinary retention, sedations, etc.) of the pain medications you will be taking.

This protocol is a state of the art protocol that begins to treat pain pre-emptively (prior to surgery) which is a very effective strategy, as we know you will be experiencing pain after. By treating this pain before it begins and "staying ahead" of the pain, we are more effective at keeping you comfortable and allowing you to do the necessary components of physical therapy which are essential for a speedy recovery with minimal side effects.

Keep in mind that we will do our absolute best to keep you as reasonably comfortable as possible, but you cannot expect to be "pain-free" for several months after surgery as there is necessary healing and recovery that need to take place.

Note: It is important to also realize that as every individual has differences in how they experience and report pain, the management of this pain is also very individualized to help with each patient's own needs and intolerances or allergies with certain medications.

JRI Home Exercises

After a total joint replacement, the tissues around the hip and/or knee have been traumatized by the surgical procedure, and just like a broken bone or skin that has been cut or burnt, the tissues will need several months to heal and recover and there is nothing we can do to “speed up” this normal process of healing. The first several weeks after the procedure entail resting the tissue to allow the inflammation to “quiet down”. If too much activity or therapy is done during this period, the inflammation and swelling will worsen and you will likely have set backs. It is important to be up and walking a moderate amount as instructed by the therapy team without causing further pain or swelling. Other than while up and moving around, Phase 1 requires a significant amount of time flat on your back with the involved joint elevated above your heart to help reduce pain, swelling and inflammation.

The recovery process is broken down into 3 phases, which are clearly outlined in the table below:

Physical Therapy after Total Joint Replacement	
PHASE 1 (0-3 WEEKS)	• Rest, rest and more rest • Walk a moderate amount as instructed but try to avoid too much activity • When you aren’t walking, you should be laying flat on your back with your feet ABOVE your heart • Progress from: Walker to Cane to Nothing at your own pace • Daily **JRI Home Exercises** are all that is necessary from a therapy standpoint at this point • With knees, you MUST get it as straight as possible in this phase. You must wear the prescribed knee brace at night to help keep it straight while sleeping
PHASE 2 (3-6 WEEKS)	• For Partial and Total Knees, we will institute **Formal Outpatient PT** at this point (~6-8 weeks) • For Total Hips, no formal outpatient therapy is necessary • Continue with daily **JRI Home Exercises** • Walk as much as you are able without causing increased pain and/or swelling • When you aren’t walking, you should be laying flat on your back with your feet ABOVE your heart
PHASE 3 (6-12 WEEKS)	• We will adjust need for **Formal Outpatient PT** as needed at this point depending upon your progress • Continue with daily **JRI Home Exercises** for 6 more weeks • We will typically *SLOWLY* transition you back to normal exercise routines during this phase • We will advise you of any other activity/therapy modifications at this point if necessary

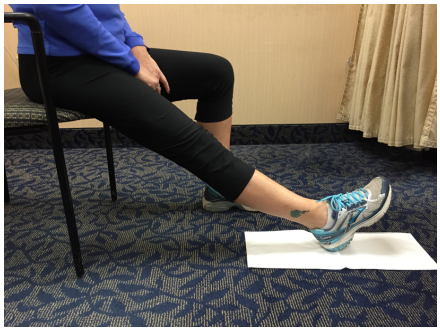
Phase 1 (0-3 weeks)

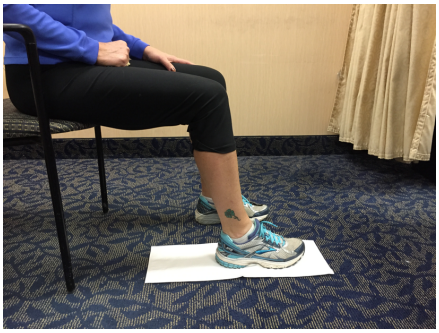
- **Knee Extension (KNEE PATIENTS ONLY):** Place a rolled blanket or several pillows under your heels to build a “suspension bridge” of your leg allowing the knee to hang or “suspend”. While in this position, try to straighten your knee as much as possible by using gravity. It is extremely important to get full extension in the first several weeks after a knee replacement, otherwise, it is very difficult to obtain. You must keep your toes pointed straight to the ceiling during this exercise.

- **Heel slides (KNEE PATIENTS ONLY):** ***5 reps, 3 times per day*** - This exercise can be performed while seated in a chair or while lying on your back. It is easiest to sit in a chair and place a pillowcase under your foot while on a tile or other smooth surface.

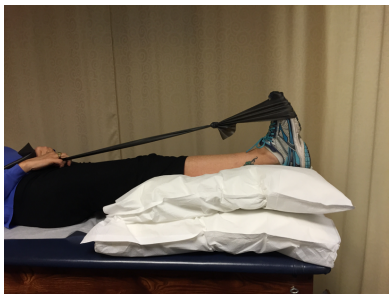
  Begin with your heel on the floor positioned with the knee extended. Slide your heel and foot toward your body while bending the knee. The goal of this exercise is to reach a ninety-degree bend in your knee within two weeks.

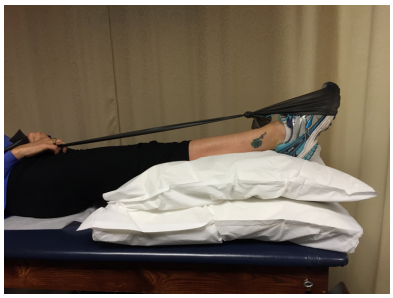
  If you do this exercise while lying on your back, begin with your operative leg straight. Slide your heel up toward your buttocks and bend your knee as far as it will go. Hold for 2-3 seconds then straighten the knee back out to starting position. Do not lift your heel off the bed or rotate your leg. Your knee should point directly towards the ceiling.





- **Ankle/calf pumps (HIP AND KNEE PATIENTS):** ***3 reps, 10 sets, 2 times per day*** - While lying in bed, point your toes away from your nose then bring them up toward your body. Eventually you will use a stretch band (as seen in the picture) to increase resistance and strengthen your lower leg muscles.



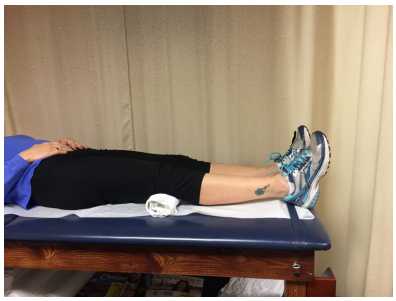


Phase 2 (3-6 weeks)

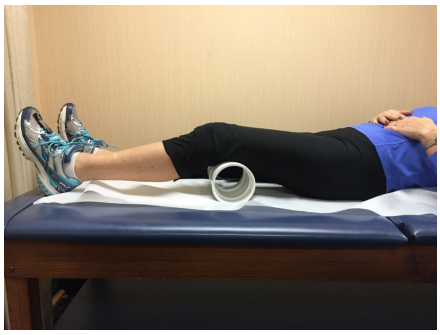
The next series of exercises will be performed beginning during "Phase 2" (3-6 weeks) and are to be continued while you are in outpatient physical therapy (if ordered by your surgeon). They are broken up between hip exercises and knee exercises. You will continue the Phase 1 exercises during this phase as well. You may do these exercises on both legs.

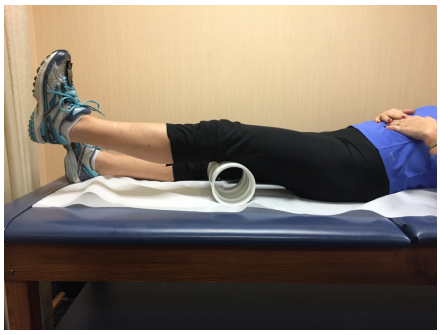
Knee Patients ONLY

- **Quad Sets:** ***3 reps, 10 sets, 2 times per day*** - Your quadriceps muscle (front of the thigh) is strengthened in this exercise. While lying in bed with your leg straight, tighten your thigh muscle and hold for ten seconds. This can be done by placing a small towel under your knee and pushing the back of your knee down into the towel.



- **Short-Arc Quads (SAQ):** ***3 reps, 10 sets, 2 times per day*** - The goal of this exercise is to strengthen your thigh muscle. While lying on your back with a small lift under your operative knee (may use a rolled up towel) so that your knee is bent slightly, tighten your thigh muscle and straighten your leg.

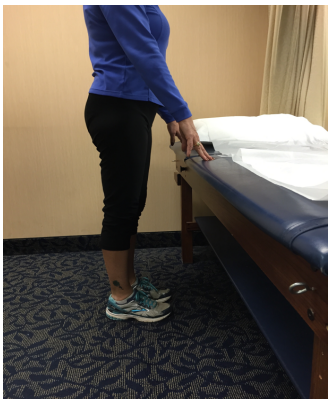
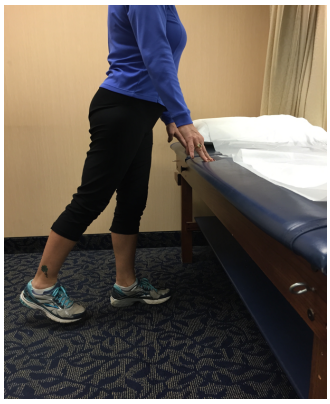




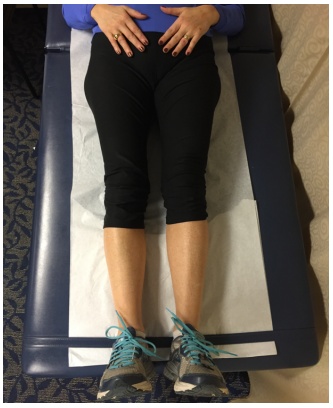
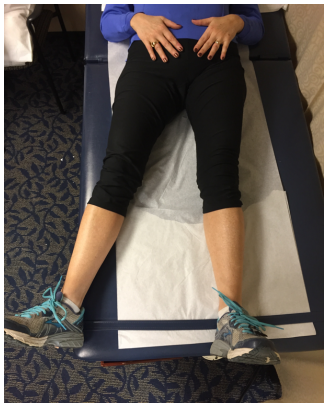
- **Straight Leg Raise:** ***3 reps, 10 sets, 2 times per day*** - Lying on your back with your non-operative leg bent up toward your body ninety degrees, keep your operative leg straight with toes pointing up toward the ceiling. Raise your straight leg up so your knees are aligned then lower it down to the starting position.

Hip Patients ONLY

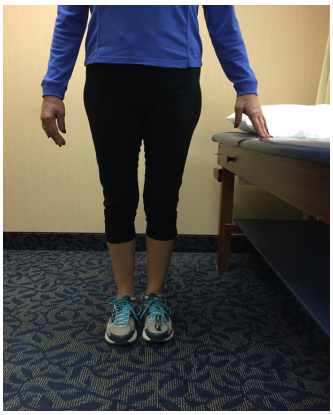
- **Standing Hip Extension:** ***3 reps, 10 sets, 2 times per day*** - Standing with your hands in front of you on a table for balance, start with feet shoulder width apart. With your leg straight, lift your leg out behind your body and hold for 2-3 seconds then return to starting position.

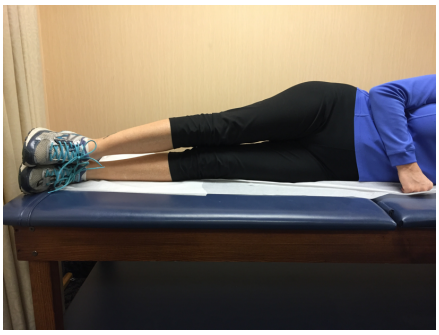
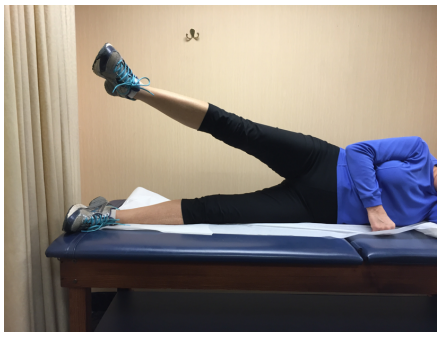
- **Supine Hip Abduction:** ***3 reps, 10 sets, 2 times per day*** - For this exercise, lie down on your back on the bed. Keep your knee straight and your toes pointing toward the ceiling. Slide your operative leg out to the side away from your body then slowly bring it back to the original position.

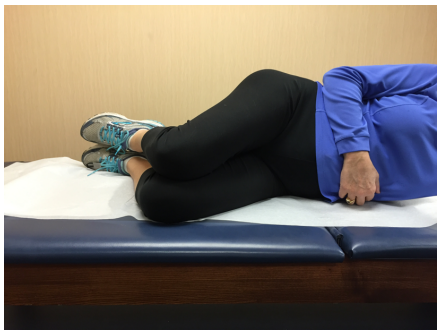
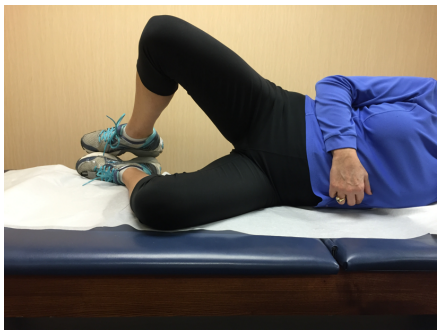
- **Standing Hip Abduction:** ***3 reps, 10 sets, 2 times per day*** - Similar to standing hip flexion, begin with both feet on the floor shoulder width apart. Bring your operative leg out to the side, away from your body. Hold for 2-3 seconds then return to the starting position.




- **Side lying Hip Abduction:** ***3 reps, 10 sets, 2 times per day*** - This exercise can also be performed while lying on your side.

- **Clamshells:** ***3 reps, 10 sets, 2 times per day*** - Lying on your non-operative side, bend your knees ninety degrees. Keeping your feet touching, raise the knee of your operative leg up away from the table then return to starting position. For comfort, you may need to place a pillow between your knees.

Hip and Knee Patients

- **Gluteal Sets:** ***3 reps, 10 sets, 2 times per day*** - Similar to the quad sets, your buttock muscles are important to strengthen. While lying in bed or standing, tighten your buttock muscles and hold for ten seconds then relax.
- **Heel Raises:** ***3 reps, 10 sets, 2 times per day*** - Standing with both feet flat on the floor shoulder width apart, raise up onto your toes. Hold this for 2-3 seconds then return your heels to the floor.


Phase 3 (6-12 weeks)

We will adjust the Formal Outpatient PT protocol as necessary. You should continue all of the above Phase 1 and Phase 2 exercises during this phase. We will likely begin to SLOWLY transition you back into normal exercise routines at a gym if you would like. It is important to realize that this is done in a very SLOW and PROGRESSIVE fashion to avoid setbacks and/or injuries. We will address this at your 6-week post-op visit in our office.

STAIR CLIMBING: ***"Up with the GOOD, down with the BAD"***

With a walker:

Begin by folding in the walker handles.

With one hand on the stairway railing and the other on the walker, place the walker on the next step up. Using your non-surgical leg, step up onto the first step. Then bring your surgical leg up onto the step. Place the walker on the next step and repeat, starting with your non-surgical leg

To go down steps, begin with one hand on the railing and one hand on the closed walker. Place the walker down one stair from the one your feet are on. With your surgical leg first, step down onto the stair below. Then follow with your non-surgical leg. Repeat this to continue.



With a cane:

Similar to using the walker, begin with both feet on the floor and the cane in the hand opposite the stair railing (1). Using the railing and the cane for stability, bring your non-surgical leg up onto the step (2). Next, bring the cane up onto the step (3) then follow with your surgical leg (4).

Repeat the process to proceed to the next step.


1


2


3


4

To go downstairs, begin with both feet on the ground, one hand on the railing, and one hand on the cane (1). Take the cane and place it one step below you (2). Next, step down with your surgical leg (3) and follow this with stepping down with your non-surgical leg (4).


1


2


3


4

GETTING IN AND OUT OF A CAR WITH A WALKER

Begin by making sure the seat is pushed all the way back. Open up the car door and stand as close as you can with your back turned toward the seat and the walker placed in front of you. Place the walker to the side, making sure it is still within reaching distance. Place one hand on the door-frame and the other hand on the frame of the car.

Slowly lower your body onto the seat of the car, using your arms to steady yourself. Lift the leg that goes into the car first (will vary depending on if you are on the driver's side or passenger side). If this is your surgical leg, you may need to lift it with your arms. Then bring the other leg into the car. To get out of the car, perform these same steps.

Medication Log:

Wound Care for Hip and Knee Replacements

Wound care for hip and knee replacements is very similar. For patients that do not have skin clips/staples (most primary hip and knee replacements) buried dissolvable suture and skin glue are utilized. Showering is encouraged before leaving the hospital and/or as soon as possible post operatively. You should not submerge the incision until given permission by your physician, this is generally for six weeks after surgery - this includes baths, hot tubs, swimming pools, lakes/rivers etc. *These instructions include:*

- Keep the bandage placed in the OR intact for 2 weeks after surgery

- Once you remove the initial dressing, keep the incision clean and pat dry. Do not scrub

- Do not apply any lotions, creams or ointments until given the OK to do so.

- Simple soap and water is all that is necessary

For **anterior hip replacements**, you should not sit with the hip in a 90 degrees flexed position for more than 20-30 minutes at a time in order to avoid undue pressure on the incision. You should also lay flat on your back throughout the day and pull the belly or abdominal tissue up to allow the incision area to dry out (particularly after a shower) for 20-30 minutes. Keeping this area clean and dry is key to helping prevent wound complications.

For patients that have had **revision surgery** or any other replacement in which skin clips/staples are used the same instructions apply; however, you will need to have your staples removed at your first post-operative appointment 3 weeks after your surgery. It is not unusual for these incisions to drain for a day or two after surgery and a light dressing secured with paper tape for hips is usually necessary until the drainage subsides. For knees, a light dressing secured with an Ace wrap may be necessary.

Please call the Total Joint Hotline at 724.646.0400 ext. 0 or your surgeon's office at 814.333.7109 if you experience any increased redness, drainage, wound dehiscence (separation) or openings, etc.

Icing and Swelling Control:

You will be using an icing system that also uses compression. You will be given instructions about how to use this system. Use the icing system provided along with the ambulatory DVT pumps and use as directed. It is rarely possible to "over-ice" the hip or knee. The ice and compression help to decrease pain and swelling which will help you to improve early range of motion of your new joint. Sleeping with the icing unit on and use it several times throughout the day is important. Please place a thin towel or pillowcase between the ice and skin to avoid frost-bite.

Follow-up Appointment:

Prior to being discharged, it is important to set up your first post-operative follow-up appointment for 3 weeks from the date of your surgery. If you are having any issues that require attention prior to the 3 week appointment, it is extremely important to call the office directly and speak with one of the Whole Health team members. Further instructions will be given at that time.

Questions, concerns and reasons to call the office prior to 3 weeks after surgery:

- Fever: greater than 101 degrees Fahrenheit

- Increased or excessive drainage from the incision

- Increased redness around the incision

- Pain out of proportion in the involved joint

- Significantly increased pain or swelling in the involved extremity

- Any falls or trauma to the involved joint or extremity since the time of surgery

- Any wound dehiscence (separation) or opening

Pain Management

You will be prescribed several different pain medications based upon your individual needs and potential drug allergies. You are to take these as directed and follow the prescription instructions closely. Most patients will only require narcotic pain medication (i.e. Norco) for approximately 3-6 weeks, after which any refills or continued use will be determined on a case-by-case basis. If continued narcotic use is necessary, a pain management consultation will likely be recommended.

Blood Clot Prevention

After undergoing a joint replacement surgery, your risk of blood clot (Deep Vein Thrombosis or DVT) is increased. Standard DVT prevention protocol for all joint replacements in patients with no previous history of blood clots, pulmonary emboli, malignancy, and/or clotting disorders is:

- Aspirin 8 mg: 1 pill two times a day with food
- Ambulatory SCD's (calf pumps): to be worn 18 out of 24 hours, every day for 3 weeks

Note: For patients that are increased risk (one or more of the above risk factors): another form of chemical prophylaxis will be chosen (i.e.: Coumadin, Lovenox, etc.)

Patient Responsibilities

Be Involved In Your Care

The **most important person** involved in your surgical experience is **you**. Our goal is to make you educated and as informed as possible regarding your surgery and recovery process. If you have any questions along the way, it is important to ask your surgeon and make sure you understand the answers completely. Make yourself knowledgeable regarding any consent forms you sign and make sure you are fully aware of the risks and benefits involved in your surgical procedure.

Edgewood Surgical Hospital's mission is to work as a TEAM to provide the best patient care possible. Our emphasis will be on behavior and attitude so that we may give each patient that special feeling of not being alone for any procedure. The Hospital will commit to excellence in patient care by treating patients and staff fairly, by listening carefully to the needs of the patients, and by communicating openly and honestly to our patients and our fellow peers. We, at Edgewood Surgical Hospital will take responsibility for our professional and patient care and be accountable for all actions at the facilities.

Edgewood Surgical Hospital's vision is to be the community's first choice for caring and trusted, specialized healthcare.