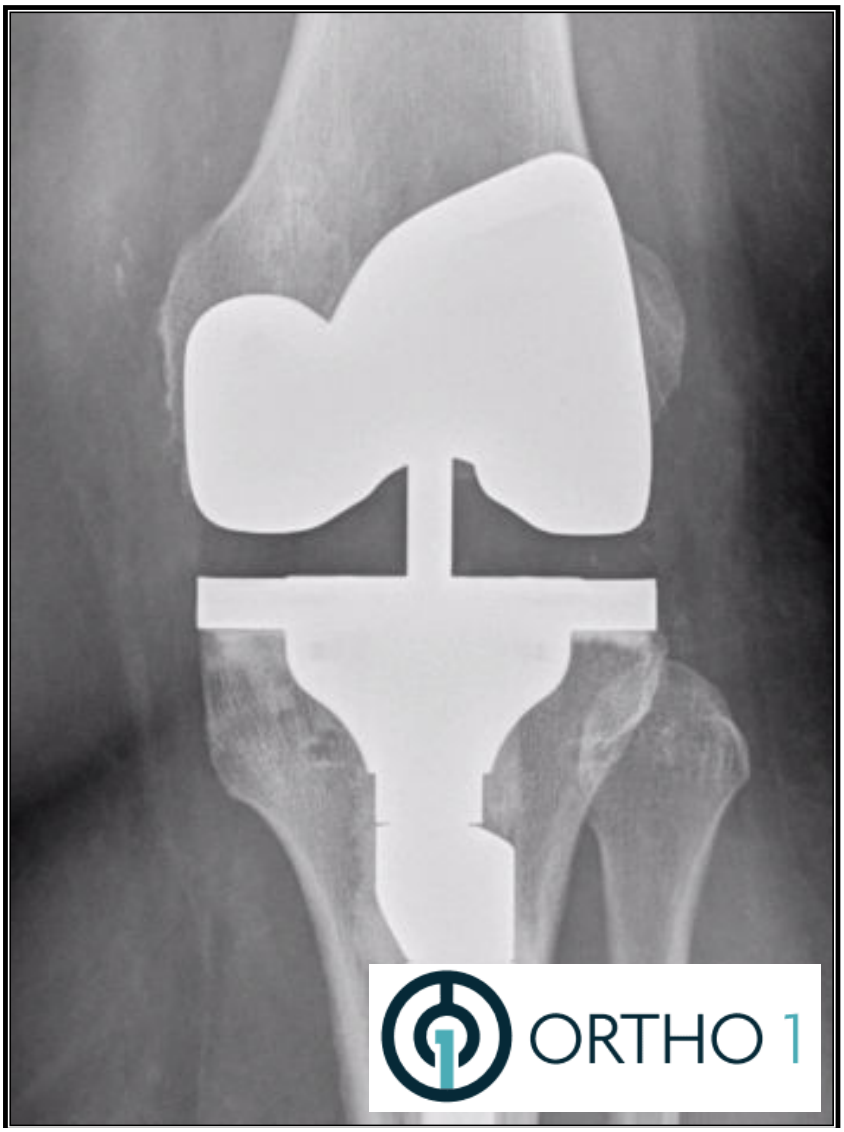

Knee Replacement Surgery

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Ortho 1 Medical Group

www.sdhipknee.com

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Introduction

Dear Patient,

Thank you for choosing and for trusting Ortho 1 Medical Group for your care.

If you are reading this manual then you have decided to have knee replacement surgery. This can be a stressful time, and you likely have a number of questions and concerns. We hope that this booklet will help answer your questions and address any concerns that you may have.

Please remember that while this booklet will address most frequently asked questions, this information does not substitute for direct communication with your surgeon's office. If you have still have questions after reviewing this information, please do not hesitate to call and clarify any outstanding issues. We encourage you to take this booklet with you to the hospital for reference and for notes regarding your surgery.

Your satisfaction is of paramount important to us, and we are dedicated to making your experience as smooth and trouble-free as possible. The surgeons here are well-trained in state-of-the-art joint replacement, and you are in the best of hands.

Nicholas Kusnezov, MD
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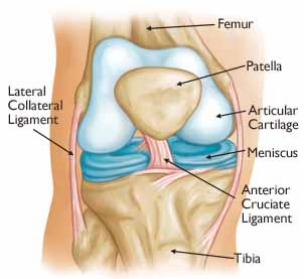
Anatomy of the Knee



The knee is made up of the lower end of the thigh bone (**femur**), the upper end of the shin bone (**tibia**), and the knee cap (**patella**). Where the ends of these three bones touch are covered with articular cartilage, a smooth substance that protects bones and enables them to move easily.

The meniscus, is a wedge of soft cartilage between the femur and tibia that serves to cushion the knee and helps to absorb shock during motion. Ligaments hold the femur and tibia together and provide stability. The long thigh muscles give the knee strength.

Remaining surfaces of the knee are covered by a thin lining (**synovium**) that releases synovial fluid that lubricates the cartilage. This lubrication reduces friction to nearly zero in a healthy knee. Normally, all these components work together in harmony. However, disease or injury can disrupt this harmony and result in pain, muscle weakness, and reduced function.

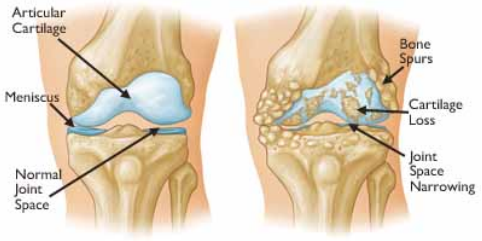
Arthritis

Arthritis means "inflammation of a joint." Arthritis is the leading cause of disability in the United States. There are three basic types of arthritis that may affect the knee joint:

1. **Osteoarthritis** (OA): the most common form of knee and hip arthritis. OA is usually a slowly progressive degenerative disease in which the joint cartilage gradually wears away. It most often affects middle-aged and older individuals.

2. **Rheumatoid Arthritis** (RA): an inflammatory type of arthritis that can destroy the joint cartilage. RA can occur at any age. RA generally affects multiple joints.

3. **Post-Traumatic Arthritis**: can develop after an injury to the knee or hip joint. This type is similar to osteoarthritis and may develop years after a fracture, ligament injury, or meniscus tear.



Healthy Knee **Knee with Arthritis**

Symptoms of Arthritis:

· Weakness (atrophy) in the muscles
· Tenderness to touch
· Stiffness
· A grating feeling or sound (crepitus) with movement
· Pain when pressure is placed on the joint or the joint is moved

Considering Joint Replacement

No matter what age you are, joint arthritis may keep you from activities you enjoy. Pain, stiffness, and decreased mobility may even limit you from performing the most basic activities of daily living. The decision to have joint replacement surgery should be a cooperative one made by you, your family, your primary care physician, and your Orthopaedic surgeon.

You may benefit from joint replacement surgery if:

· Joint pain limits your everyday activities such as walking
· Joint pain continues while resting, either day or night.
· Stiffness in a joint limits your ability to move or lift your leg
· You have poor pain relief from anti-inflammatory drugs or other prescribed medications
· You have harmful or unpleasant side effects from your pain medications
· Other treatments such as physical therapy or the use of gait aid such as a cane do not relieve joint pain.

Realistic Expectations following joint surgery:

More than 90% of individuals who undergo total joint replacement experience a dramatic reduction of joint pain and a significant improvement in the ability to perform common activities of daily living. Total joint replacement will not make you a super-athlete or allow you to do more than you could before you developed arthritis.

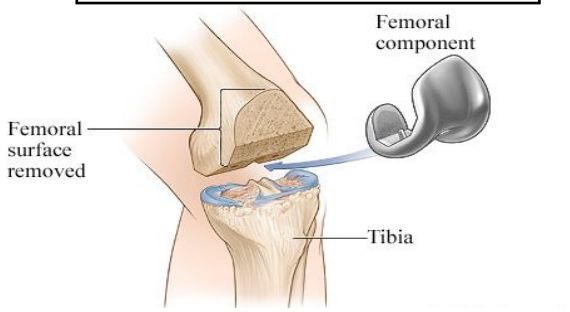
Goals of joint replacement surgery:

· Improve quality of life
· Decrease pain
· Increase muscle strength
· Increase mobility
· Increase independence

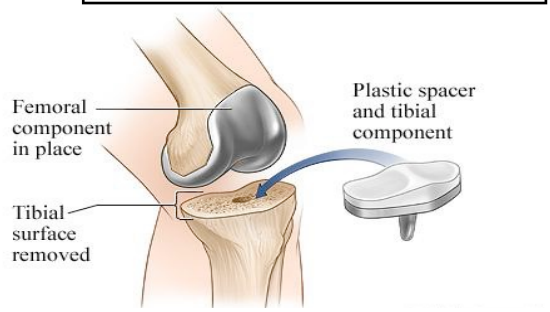
KNEE REPLACEMENT SURGERY

Knee replacement surgery has become a common orthopaedic procedure in the United States. Knee replacements are performed to alleviate pain and disability caused by osteoarthritis, rheumatoid arthritis, fractures, congenital deformities, and other knee-related problems. The surgery involves replacing the damaged surfaces of the knee. The weight bearing surfaces of the femur and tibia are removed and replaced with metal and polyethylene (plastic). The early benefits of knee replacements are excellent. In most uncomplicated cases, patients can expect to be relatively pain-free, have full knee 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. With our current innovations and state-of-the-art post-operative protocols, most patients may return home the same day of surgery. The surgical procedure is outlined below:

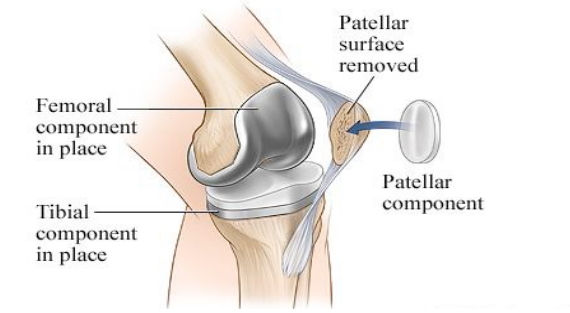
1 Removal of damaged cartilage from the lower end of the femur and placement of the femoral component.



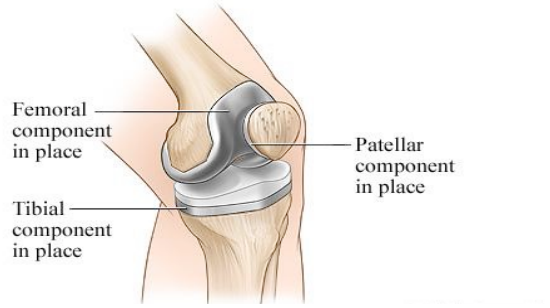
2 Removal of damaged cartilage from the upper end of the tibia and placement of the tibial component.



3 Removal of damaged cartilage from the patella and placement of the patellar component.



4 Completed knee replacement. Incision is closed with absorbable suture, skin glue, and bandaged.



PRIMARY TOTAL KNEE REPLACEMENT

Patients frequently ask, *"What exactly is a total knee replacement?"* The simplest answer is that it is a complete replacement of the worn and arthritic surfaces of the knee joint, similar to resurfacing a road full of potholes. In this procedure, all parts of the joint that contact each other are covered with an artificial surface. With arthritis, the cartilage covering the ends of the bone within the knee joint is badly worn. In a knee replacement, the damaged cartilage, along with a very small amount of bone, is removed with precision guides and instruments. The knee replacement implant, which is made of metal and plastic, is then fitted to the bone to provide an artificial surface that eliminates pain.

PARTIAL KNEE REPLACEMENT

Unlike total knee replacement, partial knee replacement greatly benefits patients who have localized types of knee arthritis. In this procedure, only one "compartment" is replaced. This includes the inside (medial), outside (lateral), or patellofemoral (front) portion of the knee. Partial, or unicompartmental, knee replacements have been performed for over 20 years. In recent years, surgeons have developed new instruments and implants that have made it possible to perform this operation through much smaller incisions. The benefits of this *minimally invasive unicompartmental knee surgery* are numerous. Because the surgery is less extensive and because healthy portions of the knee are maintained, the procedure is safer and less painful. Patients recover more easily and quickly. Because there is less bleeding and pain, the procedure can be done safely and often with a shorter hospital stay compared to a total knee replacement.

While arthritis may initially be isolated to one "compartment" of the knee, this may progress to involve the other compartments over time. A benefit of minimally invasive partial knee replacement surgery, especially for today's active patients, is the ease with which it can be changed to a complete replacement when the arthritis progresses or if the first replacement wears out. In most instances, the revision of a unicompartmental surgery is straightforward and yields very good results. Although we as surgeons can be mostly sure before surgery that a partial knee replacement is best for a patient, we make the final decision between a partial or total knee replacement during surgery. We only will opt to perform a total knee replacement if the patient's arthritis proves to be so severe that a total knee replacement is necessary to improve knee function and relieve pain.

REVISION KNEE REPLACEMENT

The final variety of knee replacement surgery is referred to as a "revision" total knee. Roughly one in ten total knee implants will fail over a 10-year period and will require a revision of the prosthesis. Since a revision is performed to replace failed knee implants, a revision is more complex and often requires an implant specially designed for a knee replacement that has failed. Due to the fact that the bone is not as strong when an implant is removed, and the ligaments supporting the knee may be damaged, a revision prosthesis helps to address these problems. For

example, the surgeon can fit a stem inside the canal of the bone to provide more support for the prosthesis.

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 the plastic insert. However, the procedure is complex when it involves replacing failed metallic components, 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 knee replacement. Furthermore, scar tissues from previous surgery and bone from the failed knee replacement require special attention both during and after surgery.

After surgery, we customize the rehabilitation plan for each revision patient on the basis of the difficulty and the extent of the revision 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.

RAPID RECOVERY KNEE REPLACEMENT

There is a tremendous amount of information available to patients about minimally invasive knee surgery. Most of this is marketing material designed to make the surgery more appealing to patients. We use custom-designed instruments that allow all patients to have the smallest possible incision. The main factors that determine the length of the incision are the patient's height and weight. We must make the incision long enough to do your surgery correctly and safely. 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. However, we do not focus just on the length of the incision but on a team concept designed to speed recovery and return to work. This team approach includes thorough patient education, meticulous pre-surgical planning, less traumatic surgery, better anesthesia, improved multi-modal pain control, and faster return of function.

YOUR HEALTHCARE TEAM

- **Orthopedic Surgeon—** Your specially-trained joint replacement doctor and the team leader.
- **Nurses—** You will encounter different nurses throughout the process. Orthopaedic clinic nurses work closely with your surgeon and will be available to answer any questions you have. They will also assist you with your pre-operative process. There are RNs, licensed practical nurses (LPN), medics, and certified nurse assistants (CNA) who will be taking care of you while you are in the hospital, from the time you are admitted until you go home. They will assist with your needs and concerns after surgery, including managing your pain, moving around, and personal care needs.
- **Orthopedic Clinic Staff—** Many different types of people work in the clinic to assist you with your care. The joints coordinator will be your main point of contact. You may encounter orthopaedic technicians who may help take out stitches or fit you for a brace, appointment clerks to assist with making appointments, the surgical scheduler who assists with surgery scheduling and preparations, and reception clerks who answer telephones and check you in for appointments.
- **Physical Therapist (PT) -** Physical therapists will instruct you in muscle strengthening exercises and movement transfer techniques (getting in/out of bed or a chair, proper body mechanics). They may show you how to use mobility aids such as canes or walkers.
- **Occupational Therapist (OT) -** Occupational therapists will work with you on your everyday activities. These include grooming, dressing, bathing, doing housework, getting in and out of bed, bathtub, and car.
- **Social workers and/or Case Managers—** Social workers and case managers work with you and your family to offer support and information on the resources available to you. They help you obtain equipment you may need at home as well as advise you on other home care issues. They also help coordinate your medical care needs to facilitate your return to duty.
- **Chaplain—** A chaplain is available for spiritual support. You may request this service or it may be requested on your behalf.

STEPS TO PREPARE FOR KNEE REPLACEMENT

Office Visit and Consultation

Planning begins with your first office visit. At that time, we will review your most recent x-rays, your current health status, and current medications. You will be seen by the surgeon and the Joints Pathway coordinator. The objective of this first office visit is to determine if knee surgery is necessary. We base this decision on many factors, including the degree of pain, the extent of decreased mobility, your response to conservative management (physical therapy, oral medications, injections, weight loss), and how much your symptoms interfere with your activities or quality of life. 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, consulting physicians, physical and occupational therapists, nurses, case managers, and the surgical coordinator. 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 knee surgery.

Imaging (X-Rays)

By reviewing x-rays of your knee, we can determine the extent of damage and effectively plan your surgery. Although you may already have x-rays of your knees, we may request that new x-rays be taken in our office. This is because x-rays must be taken according to specific guidelines so that accurate measurements can be obtained to determine the alignment and size of the prosthesis. X-rays are also taken in the recovery room immediately after surgery to confirm the position of the prosthesis as well as at follow-up visits to ensure that there are no problems that could be developing despite possible lack of symptoms.

Scheduling Surgery

Once a decision has been made to have the surgery, the joints coordinator will direct you down the path of obtaining appropriate clearances and preoperative education. A rough surgical date may be set with the surgeon, but the final date will only be confirmed once all the necessary clearances have been obtained. Surgery is usually scheduled several weeks after your office visit.

Medical and Dental Clearances

Joint replacement is a major surgery and is very stressful on the body. Many patients having joint replacement surgery may have other medical issues that need to be evaluated and optimized by a medical specialist before surgery to minimize risk from the surgery.

Poor nutrition, uncontrolled diabetes, tobacco use, and morbid obesity are just a few of the risk factors for infection that must be addressed prior to surgery. Failure to do so may result in delay of the surgery.

The possibility of joint infection caused by bacteria already within your system must also 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 knee. Increased urinary frequency, urgency, and burning are symptoms of a urinary tract infection (UTI). If you have these symptoms present, a urine test will be performed as part of your medical clearance and, if an infection is found, antibiotic treatment may be required before your operation.

Hospital Preoperative Appointments

Preoperative Surgical and 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

All patients will attend Joint Camp prior to surgery. Joint Camp is an established clinic pathway to ensure the best possible outcome from your surgery. During joint camp, you will be thoroughly educated on what to expect before, during, and after surgery. This will include but is not limited to 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 work on the exercises before surgery.

At Joint Camp, physical therapy will assess your home environment and any special home equipment needs that you may have. It is important that the equipment provided 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. Almost everyone will need a 3-in-1 elevated commode seat with arm rests and adjustable legs and possibly other equipment to facilitate "activities of daily living", or ADL equipment. 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. Any referrals for adaptive equipment with be placed prior to surgery, therefore you will have your equipment prior to surgery. If you do not have your equipment prior to your surgery, please let us know so that you will have what you need prior to discharging home.

THE DAY OF SURGERY

Reporting to the Hospital

On the day of surgery, you will report to the same-day surgery unit. 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 knee replacement operation takes approximately 1-2 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. 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. Your stay in the PACU may last anywhere from 30 minutes to 2 hours after which you may be discharged home, moved to observation, or moved to the hospital ward in select instances.

Family Waiting Area

Family members are not permitted to visit with patients in the PACU. The Same-Day Surgery secretary will notify family members when you are transferred to your room.
Family members are asked to wait in the Family Waiting Area. 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 notify the secretary. 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.

YOUR POST-OPERATIVE COURSE

Pain Medicine

Patients should expect a significant amount of pain for 24 to 36 hours following knee 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 is managed by a combination of *spinal* analgesia as well as an *adductor canal block*, possibly with an in-dwelling catheter. The *spinal* is the shot you receive in your back in the operating room before surgery, and may last anywhere from 2-4 hours after surgery. Your legs will be numb and weak until the medication wears off. The *adductor canal block* is designed to control pain but not affect muscle strength, allowing you to walk the day of surgery.

You will begin taking oral medication for your pain the day of surgery. It is helpful to take pain medication 30 minutes before therapy so that you are comfortable enough to tolerate a good workout. You will feel progressively better each day with the increase of activity, and by the time of discharge, you should be experiencing less pain.

All medications have potential side effects, and pain medications are no exception. You 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

The day after surgery your wound bandage will be changed. To avoid irritating the skin, we use a special nonstick bandage without tape. Your elastic stocking will hold this bandage in place. You may notice that your knee is slightly swollen and that way be blisters or bruising, sometimes all the way down to your heel. This is from the bleeding that occurs shortly after surgery and will slowly disappear. To close the wound, your surgeon uses staples, which are removed by the nurse 14 days after surgery as long as 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 and swelling 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. Lastly, we use medication to thin your blood for 30 days after surgery. Depending on your risk factors, this may be oral or injected medication.

If there is a suspicion that you have developed a blood clot in your leg after surgery, we will obtain an ultrasound. 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.

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. Your nurse will show you how to use the spirometer.

Meals

On the day of surgery, you will initially be offered liquids and will progress gradually to a normal diet as tolerated. 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.

Physical Therapy Sessions

If you are medically stable and once have regained motor control of the operated lower extremity, you will ambulate the day of surgery. You will be WBAT (weight-bearing as tolerated), meaning you are able to place as much weight through your lower extremity as you can tolerate. Most patients will be mobilized by physical therapy the day of surgery and return home that day. Once you are discharged home, subsequent physical therapy will be scheduled to ensure you are continuing the rehab process.

Final Discharge Instructions/Prescriptions

At the time of discharge, the nurse will review your discharge instructions with you. Most patients have some discomfort at home when they perform their exercises. You will receive a prescription for pain medications, 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 knee after therapy helps to control discomfort.

DISCHARGE

Make plans for your discharge from the hospital after your Joint Replacement surgery is a very important part of your recovery. Most patients are able to return home after surgery while some will require additional help and services than what is available at home. Based on your recovery after surgery, the safety of your living space, and the availability of help when you go home, you and your health care team will determine the best option for your discharge.

Goals for Hospital Discharge

· Independent with transfers and walking with use of a walker or crutches on level surfaces and stairs
· Pain is well controlled with oral pain medications
· Able to independently perform activities of daily living (ADL's) safely and effectively
· Have a clear understanding of joint precautions
· Outpatient PT appointment arranged
· Safe home environment for discharge

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 knee 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 3-5x's per day. Make sure to ice after each exercise session. You should also have a physical therapy appointment scheduled to continue with your rehab process. Home health and outpatient physical therapy appointments should be scheduled prior to discharging from the hospital.

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 knee 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. Remember, surgery is painful and this is a MAJOR surgery. Your knee will be sore but the pain will improve every day. 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 knee after activity.

Going Home

By Car

Patients are able to go home by car after knee 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 knee 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. This first follow-up visit will include measurements of swelling, knee motion, and strength by physical therapy; and an examination of the knee by your surgeon. At this time, the surgical stockings are usually discontinued unless leg swelling persists.

Annual Follow-up Visits

We strongly recommend a return visit at least 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 knee. Over 90% of total and partial knee 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.

PREPARING FOR 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
- Prepare your home:
    - 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
    - Clean house, vacuum floors, and ensure all walkways are clear.
    - Purchase groceries for approximately 4 weeks ahead of time.
    - Prepare frozen meals and have ready-to-eat foods on hand to ease the burden of cooking during your recovery time.
    - Place most commonly used items downstairs and at arms level to avoid reaching, bending, and going up/down stairs.
    - Put frequently used items in your "recovery area." This may include phone, remote control, radio, tissues, wastebasket, reading materials, and medications.
    - Arrange your furniture to provide clear walkways for you AND your walker.
- While taking narcotic pain medication you will NOT be permitted to drive. Oxycontin and Hydrocodone or oxycodone are Narcotics. You may need to arrange for transportation to your initial follow up visit.
- You will need to follow up with your surgeon within two weeks after surgery. This appointment should 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.

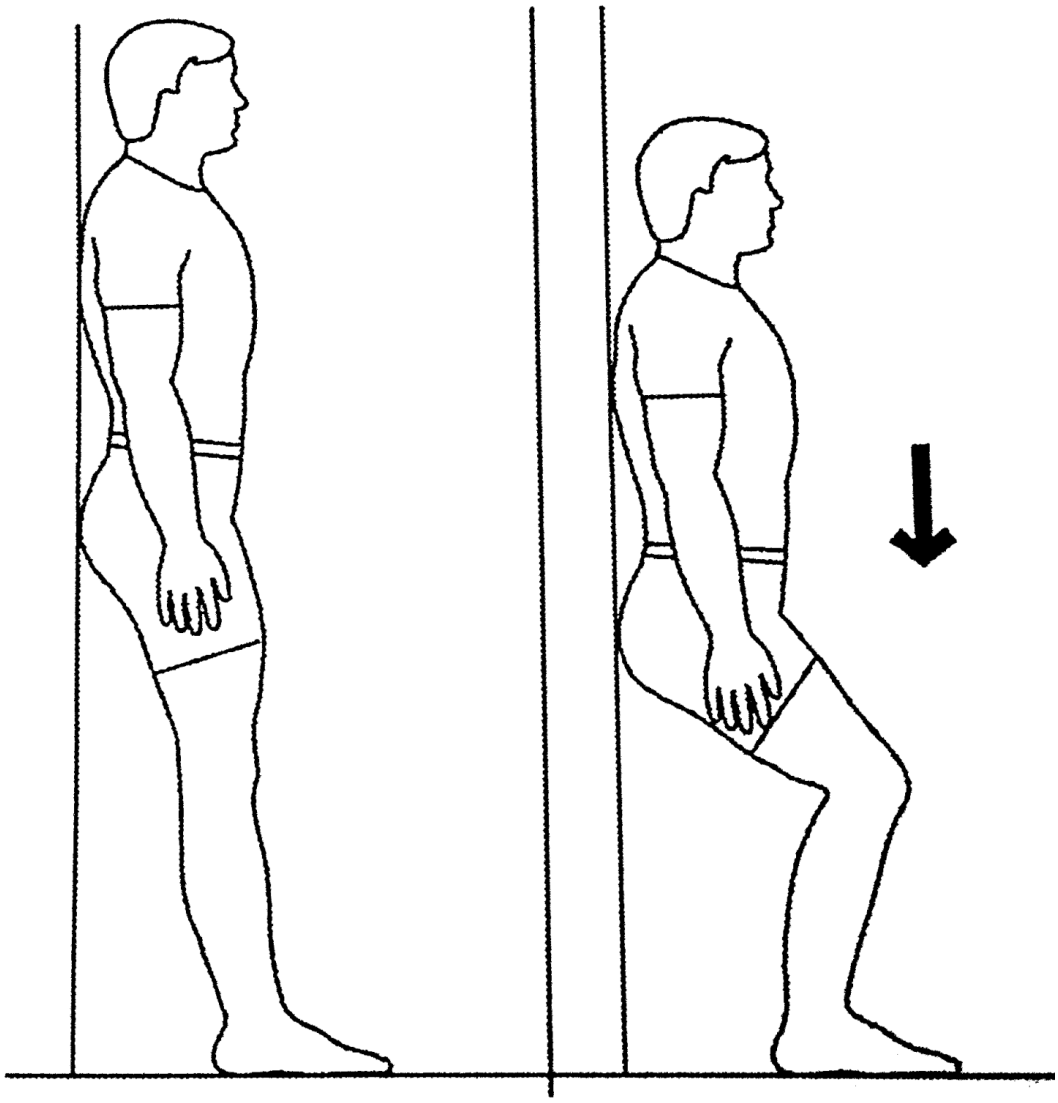
Pre-Operative Exercise Program

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

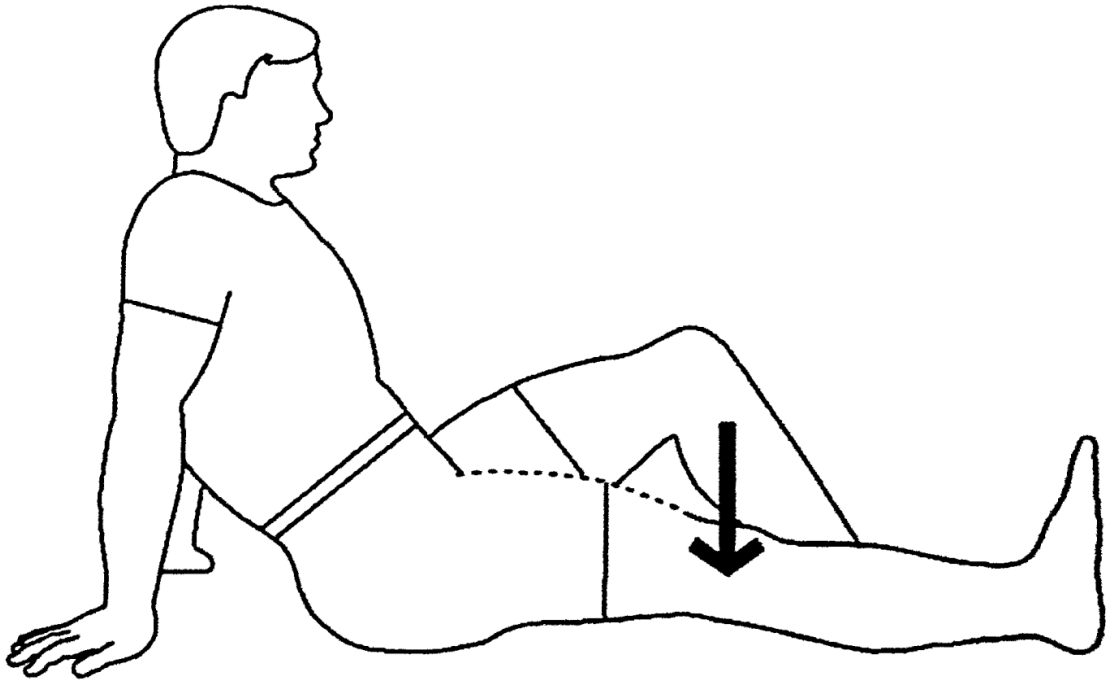


- Lean on the wall, feet approximately 12 inches from the wall, shoulder distance apart
- Bend knees to 45 degrees
- Hold for 5 seconds
- Return to start position and repeat

Special Instructions

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

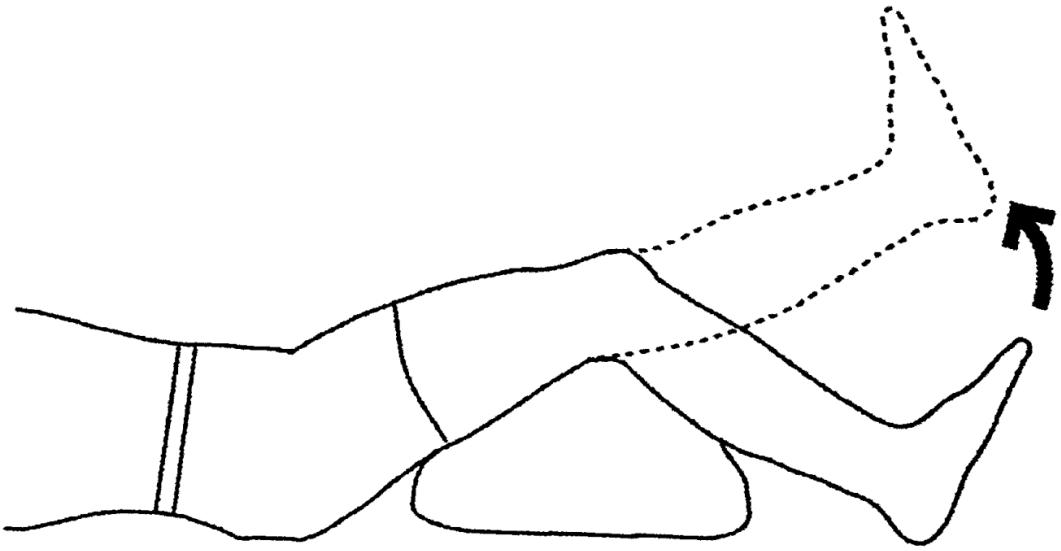
Quad Set



- 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

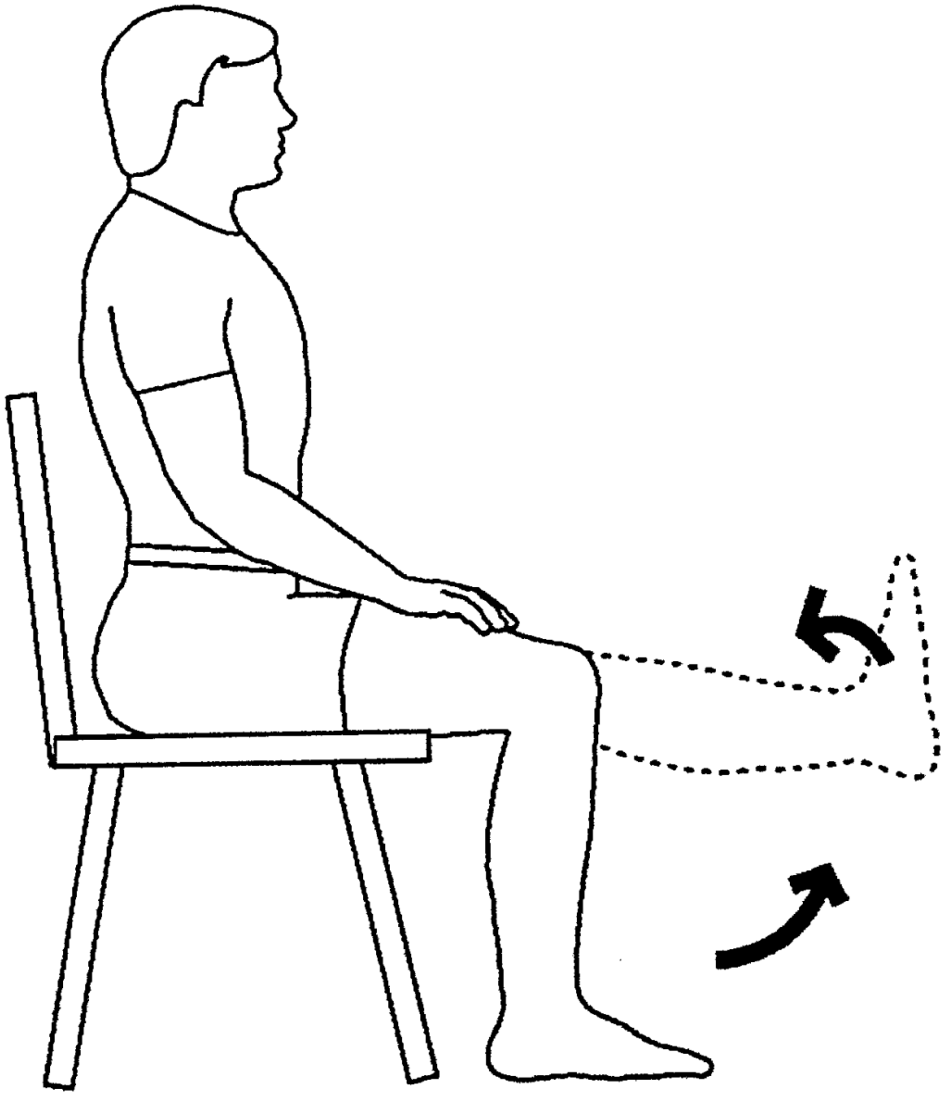


- Lie on back, with involved knee bent to 45 degrees, supported with a pillow, as shown
- Straighten leg at the knee
- Return to starting position

Special Instructions

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

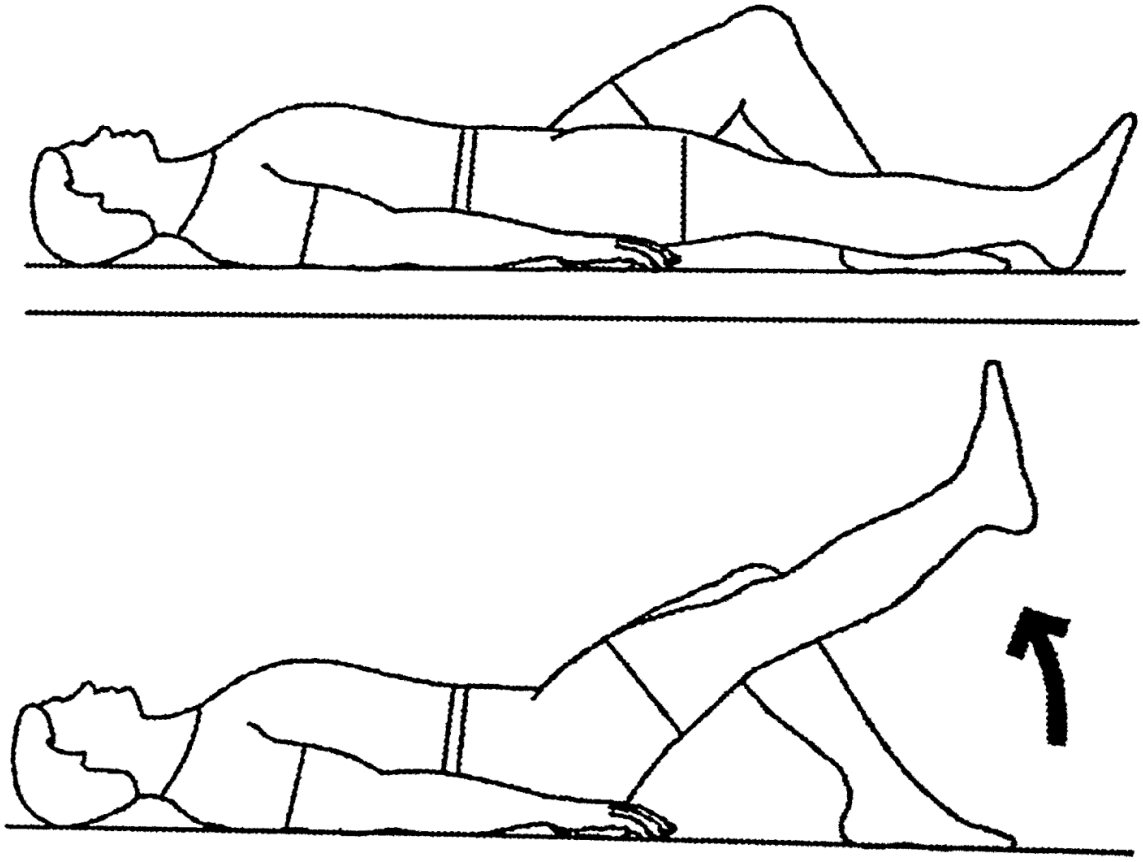
Seated Knee Extension



- 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

Medications to Stop Before Surgery

Ten days before surgery you need to stop

- Aspirin*
- Other anti-inflammatory medicines (Advil, Anaprox, Ansaid, Butazolidin, Clinoril, Daypro, Dolobid, Feldene, Ibuprofen, Indocin, Lodine, Meclomen, Motrin, Nalfon, Naprosyn, Orudis, Ponstel, Relafen, Tolectin, and Voltaren)

Seven days before surgery you need to stop

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

Five days before surgery you need to stop

- Coumadin*

You can continue to take the following medications

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

*Please speak with your primary care doctor prior to stopping any regular prescription medications (blood pressure, blood thinners, heart, etc) and what effect they may have on your surgery. This will need to be coordinated with your surgeon. Any increased risk of stopping these medications may result in delay of surgery.

** Herbal supplements may cause bleeding or interact with medications given during surgery. We recommend that supplements not prescribed should be stopped a week before surgery.

***If you are taking disease modifying anti-rheumatologic agents (DMARDS) for rheumatoid arthritis, lupus, or another auto-immune disease, please discuss stopping the medication with your primary care physician prior to doing so. This will need to be coordinated with your surgeon.

Medications to Take for Before Surgery

5 DAYS before Surgery

- Nasal Ointment (2% Mupirocin) for 5 days
    - You should use a pea-sized/small amount of ointment inside each nostril each time you apply the ointment

3 DAYS before Surgery

- Soap (4% Chlorhexidine/Hibiclens) Baths for 3 days
    - Use about 2 tablespoons of soap for each application in the shower or bath

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

- Hydrate the day before surgery. Drink lots of extra water and non-caffeinated beverages throughout the way.
- **Do not eat or drink anything after midnight** before your surgery. Your stomach needs to be empty to help prevent nausea and vomiting, a common and potentially dangerous side effect of anesthesia.
- Get a good night's sleep!

The Morning of Surgery

- Take one tablet of Oxycontin (10 mg) with a small sip of water before you leave to come to the hospital
- NO coffee or food
- You can drink ONLY WATER 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 or with a family member.
- You may brush your teeth, just do not swallow anything.
- Report to Same Day Surgery at the instructed time. Here you will be prepped for your surgery.
- If you use a CPAP machine, please write down your settings so the respiratory team can provide you with the proper equipment while you are at TAMC.
- If you have an Advance Directive, bring it with you on the day of your surgery.

Medications to Take for After Surgery

Oxycontin: Long-lasting Narcotic pain pill, to be taken every 12 hours after surgery for BASAL pain control. You will be weaned off of this medication in the first 5-7 days after surgery.

Oxycodone: Short-acting Narcotic pain pill, to be used as needed for BREAKTHROUGH pain, you may take 1-2 tablets every 4-6 hours. The limit is 12 tablets in a 24 hour period. You are allowed to use these pills with Oxycontin. You will be on this medication for 4-6 weeks after surgery as needed.

Tylenol (Acetaminophen): Pain medication and anti-inflammatory, take it as prescribed, every day for a total of 3 months after surgery. We recommend a limit of 3000mg per day.

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

Colace (Docusate): Stool softner/laxative for constipation. Take 2 tablets twice daily starting 2 days before surgery until you are off your narcotic medications after surgery.

Aspirin (EC ASA): 81 mg tablet to be taken twice daily for at least 30 days after surgery to thin your blood a little bit to help against blood clots.

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

Flexeril (Cyclobenzaprine) or **Robaxin (Methocarbamol):** For muscle cramps and spasms. Do not take beyond 30 days after surgery.

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*****

DISCHARGE MEDICATIONS AFTER RAPID RECOVERY KNEE REPLACEMENT SURGERY

The following chart will help you with the first 3 weeks as you recoever from surgery

Take the morning of surgery (If prescribed to you at your preoperative appointment)	
Oxycontin 10mg tab	1 pill
Aspirin	1 pill
Stool Softener	2 pills

You may resume regular medications as well as vitamins or herbal supplementes on DAY 2

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
AM	**AM**	**AM**	**AM**	**AM**	**AM**	**AM**
☐Oxycontin 1 pill	☐Oxycontin 1 pill	☐Oxycontin 1 pill	☐Oxycontin 1 pill	☐Oxycontin 1 pill	☐Oxycontin 1 pill	☐Oxycontin 1 pill
☐Omeprazole	☐Omeprazole	☐Omeprazole	☐Omeprazole	☐Omeprazole	☐Omeprazole	☐Omeprazole
☐Celecoxib	☐Celecoxib	☐Celecoxib	☐Celecoxib	☐Celecoxib	☐Celecoxib	☐Celecoxib
☐Acetaminophen	☐Acetaminophen	☐Acetaminophen	☐Acetaminophen	☐Acetaminophen	☐Acetaminophen	☐Acetaminophen
☐Stool Softener	☐Stool Softener	☐Stool Softener	☐Stool Softener	☐Stool Softener	☐Stool Softener	☐Stool Softener
☐Aspirin	☐Aspirin	☐Aspirin	☐Aspirin	☐Aspirin	☐Aspirin	☐Aspirin
LUNCH	**LUNCH**	**LUNCH**	**LUNCH**	**LUNCH**	**LUNCH**	**LUNCH**
☐Acetaminophen	☐Acetaminophen	☐Acetaminophen	☐Acetaminophen	☐Acetaminophen	☐Acetaminophen	☐Acetaminophen
PM	**PM**	**PM**	**PM**	**PM**	**PM**	**PM**
☐Oxycontin 1 pill	☐Oxycontin 1 pill	☐Oxycontin 1 pill	☐Oxycontin 1 pill	☐Oxycontin 1 pill	☐Oxycontin 1 pill	☐Oxycontin 1 pill
☐Celecoxib	☐Celecoxib	☐Celecoxib	☐Celecoxib	☐Celecoxib	☐Celecoxib	☐Celecoxib
☐Acetaminophen	☐Acetaminophen	☐Acetaminophen	☐Acetaminophen	☐Acetaminophen	☐Acetaminophen	☐Acetaminophen
☐Stool Softener	☐Stool Softener	☐Stool Softener	☐Stool Softener	☐Stool Softener	☐Stool Softener	☐Stool Softener
☐Aspirin	☐Aspirin	☐Aspirin	☐Aspirin	☐Aspirin	☐Aspirin	☐Aspirin

Please use the Oxy-IR Time Table at your convenience

*****You may take Oxy-IR as needed for pain. It is ok to take Oxy-IR while on Oxycontin*****

Oxy-IR DAY 1	Oxy-IR DAY 2	Oxy-IR DAY 3	Oxy-IR DAY 4	Oxy-IR DAY 5	Oxy-IR DAY 6	Oxy-IR DAY 7
______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM
______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM
______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM
______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM
______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM
______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM
______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM	______ AM/PM

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

A comprehensive physical therapy regimen 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 knee motion early prevents stiffness that might interfere with the way you walk and will help ensure the successful result we want for your knee. Your exercises will focus on regaining ROM, strength, and gait training. 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 tolerate your treatment sessions better. Your rewards will be regaining motion and strength in your knee, 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 knee motion, strength, and endurance. If you are not ready for outpatient therapy, your case manager will assist in arranging therapy in your home.

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	Ensure you are scheduled to start outpatient physical therapy		You should start walking without an assistive device		Initiate functional activities to return to work	
Pain Management	As directed when discharged	As directed with discharged	As directed when discharged	As directed when discharged Wean off Oxycontin		

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 knee, 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.

FREQUENTLY ASKED QUESTIONS

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 our 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 walker 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.

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 21 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 (Celebrex), 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 your surgeon. 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 my knee click?
A knee prosthesis is made of hard metal and plastic. Gravity will create a slight separation of the components. When you tighten your muscles or swing your leg, the pieces come in contact and may make a clicking sound. This is normal. It should not cause pain and does not mean that something is loose or wrong.

Will my knee set off metal detectors?
Your new joint may activate metal detectors required for security in airports and some buildings. Tell the security agents about your joint replacement prior to proceeding through the metal detectors. A wand check and possible pat down will be done to verify your statement. You will then be allowed to pass.

Why does the skin feel funny around my incision?
The nerves in the skin cross the front of the knee in an inside-out direction. When an incision is made down the front of the knee, 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 knee 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 knee wet?
Unless there is drainage from the incision, you may remove the bandage and shower 3 days after surgery. 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 four to six weeks. Occasionally some patients are able to drive sooner. This may depend upon whether the car has automatic transmission, which knee 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 knee. 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 the 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

Risks Associated with Knee Replacement Surgery

Along with the benefits of a knee replacement, there is a small risk of complications, which may include blood clots, infection, fracture, ligament or nerve damage. There may be stiffness and wound complications. These risks are small, and the problems are almost always correctable. We use the latest technology and techniques to give you the optimum care, but we also believe it is important that you are aware of potential complications, so you will understand your surgery and our efforts to minimize risks.

The most common complication of any knee 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.

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 knee components can be reimplanted with antibiotic cement in most cases. Nerve injuries occur in less than 1% of knee 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 knee 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.

Useful Websites

American Academy of Orthopaedic Surgeons
www.aaos.org
http://orthoinfo.aaos.org/

American Association of Hip and Knee Surgeons
http://www.aahks.org/

Acknowledgements

This information was adapted from multiple sources with a special thanks to the Joint Replacement program at Tripler Army Medical Center and especially Dr. Gens Goodman for contribution to the content and outline.