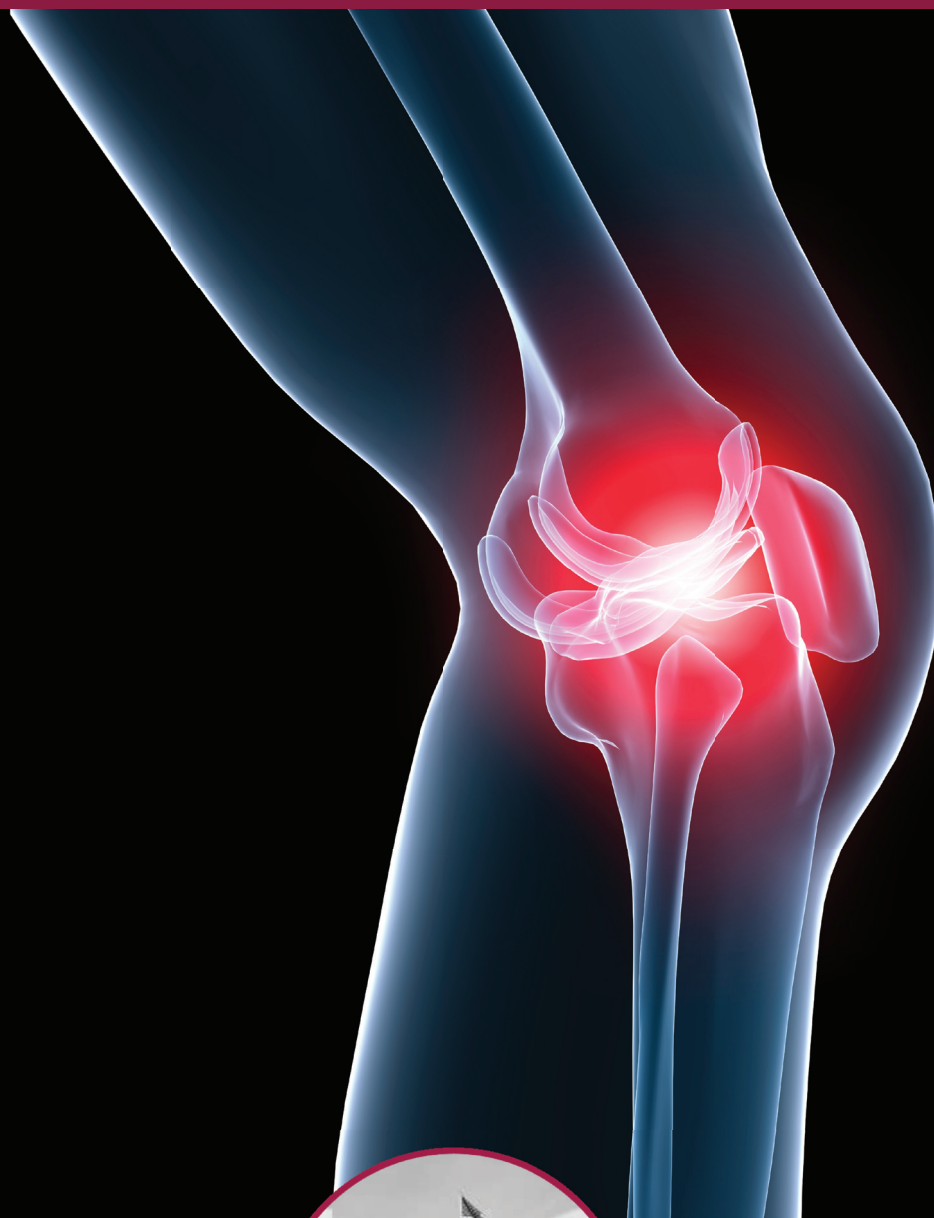


Total Knee Replacement Manual



St. Dominic's
Joint Center

969 Lakeland Drive • Jackson, MS 39216

Thank You for choosing St. Dominic Hospital

Preparing for your total joint replacement surgery is important for a successful outcome. We look forward to our first meeting with you at your preoperative visit. The pre-op visit is designed to enhance your surgery and postoperative outcomes, and it is an important part of your care.

Our Joint Center program provides comprehensive preoperative and postoperative services for our patients undergoing total hip and total knee replacement. Our program involves a multidisciplinary team of specialists, which includes doctors, nurses, physical therapists, occupational therapists, pharmacists, social services and nurse case managers. This team of specialists will help to provide you with a full array of patient services, including:

- ✿ "Joint Class," education regarding your surgery and hospital stay will be done during your pre-operative visit.
- ✿ Preoperative screening by our joint center nurse practitioner
- ✿ Advanced planning for hospital stay and postoperative care
- ✿ Individualized physical therapy
- ✿ Occupational therapy, instruction on bathing, dressing, home safety, utilizing assisted devices and more.

Our goal in the Joint Center program is to make your recovery and postoperative rehabilitation as easy, pleasant and productive as possible. Please feel free to contact us if you have any questions or concerns along the way. Our team is excited to be partnering with you in this process, and we hope we can help you to approach your surgery with knowledge and confidence. We are here to assist you in any way possible and are committed to helping make your surgery and recovery a success.

The Joint Center Staff

Resources for those deciding about joint replacement surgery

We have compiled several links to educational material that you may find helpful in deciding on surgery. Check out these links on our website at <https://www.stdom.com/services/orthopedic/the-joint-center/>

Important Phone Numbers

St. Dominic Hospital

www.stdom.com

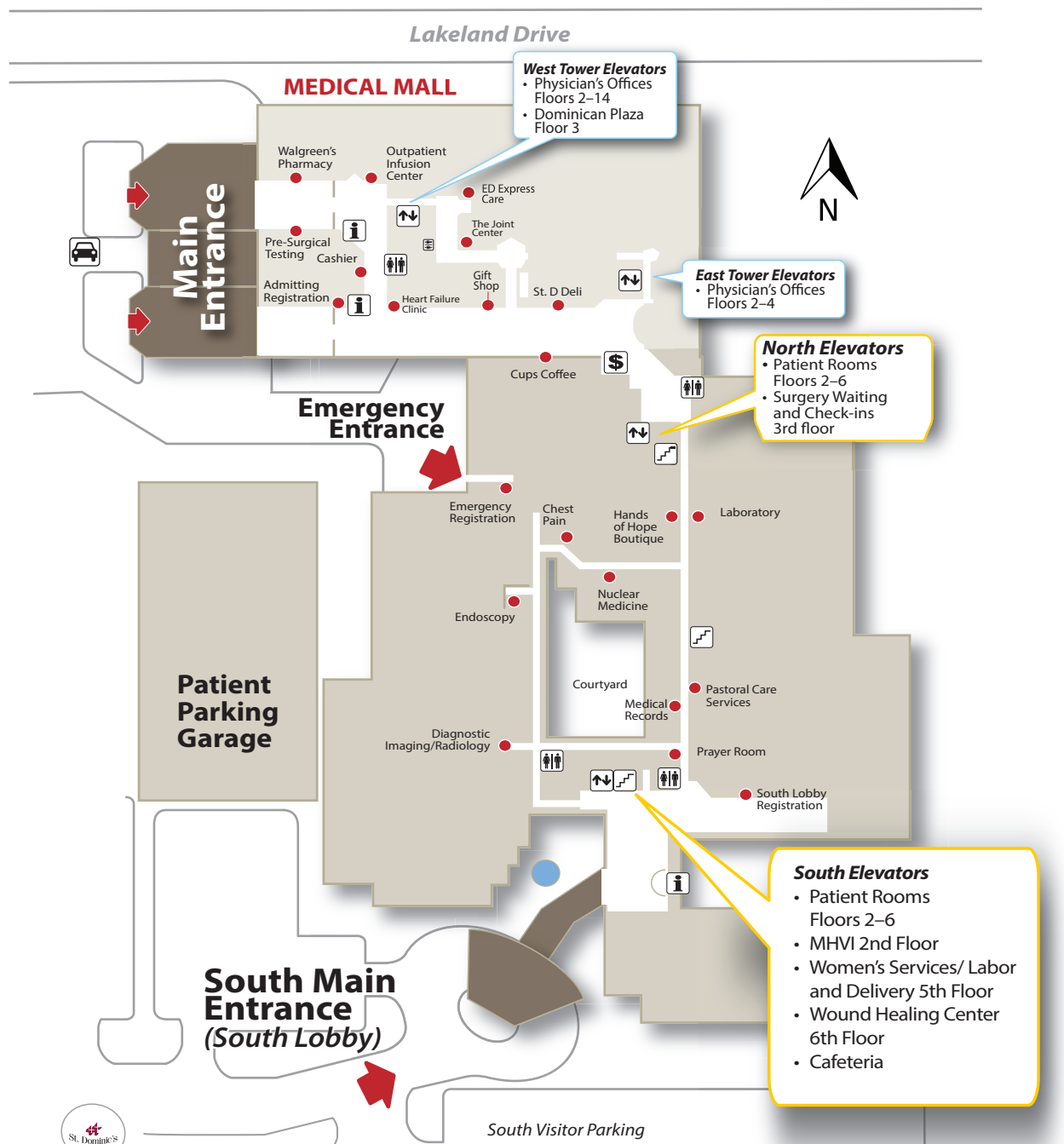
Main Hospital.....	601-200-2000
Joint Center Nurse Practitioner	601-200-5354
Joint Center Education Coordinator	601-200-6500
Pre-Admission Services.....	601-200-6737

Total Joint Replacement Patient Education Class

Thank you for choosing St. Dominic Hospital for your total joint surgery. Our Joint Center team is committed to providing you with a positive patient experience focused on your individual needs. Our Joint Center team is here to ensure the best possible outcome for your procedure and recovery.

To help guide you through your surgery, St. Dominic Hospital offers pre-operative joint education classes for both hip and knee replacement procedures.

Classes cover all aspects of your total joint replacement procedure, including your hospital stay, pain management and rehabilitation. Family and friends who will be helping you during this process are welcome and encouraged to accompany you to your class which will be held during your pre-admissions visit.



When You Arrive

When you arrive at the hospital for your pre-admission appointment, please park in the parking lot or the parking garage on the north side of the hospital (Medical Tower Parking or South Parking Deck). You will need to check in at the North Entrance Information Desk (Patient Admitting and Medical Mall Entrance). You will then be directed to the admitting office where you will sign papers giving permission for treatment and release of information.

From Admissions you will be taken to the Pre-Admissions area to begin your pre-admission process.

Anatomy Overview

HEALTHY KNEE JOINT

The knee is the largest joint in the body. It is a modified hinge joint that is formed by two bones held together by thick bands of tissue which are called ligaments. The two bones are the femur (thigh bone) and the tibia (shin bone). Ligaments help to keep the knee joint steady.

The patella (kneecap) is also part of the knee joint and is embedded in the big quadriceps tendon. The patella moves over the end of the femur (thigh bone) as the knee bends.

The quadriceps are the long muscles on the front of the thigh. These muscles help to strengthen the knee.

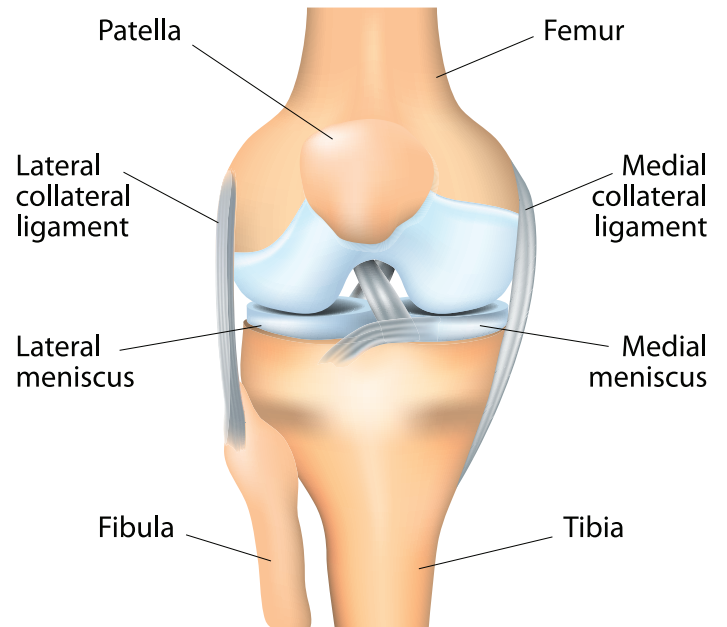
A smooth substance called articular cartilage covers the surface of the bones where they touch each other in the joint. The meniscal cartilage serves as a cushion between the bones and allows the surfaces of the knee to move with very little friction.

An X-ray of a normal knee shows space between the femur (thigh bone) and the tibia (shin bone), and space between the femur and patella (kneecap). This space in between the bones is actually cartilage, which is not visible on an X-ray.

Healthy Knee Joint



THE HUMAN KNEE



ARTHRITIC KNEE JOINT

Arthritis is a term used to describe a condition in which there is damage to the cartilage. An x-ray of a knee with arthritis shows a loss of space in between the bones. This loss of joint space represents the damaged or worn out cartilage. The lack of cartilage in the joint space causes the bones to rub together which causes damage, pain, and loss of function.

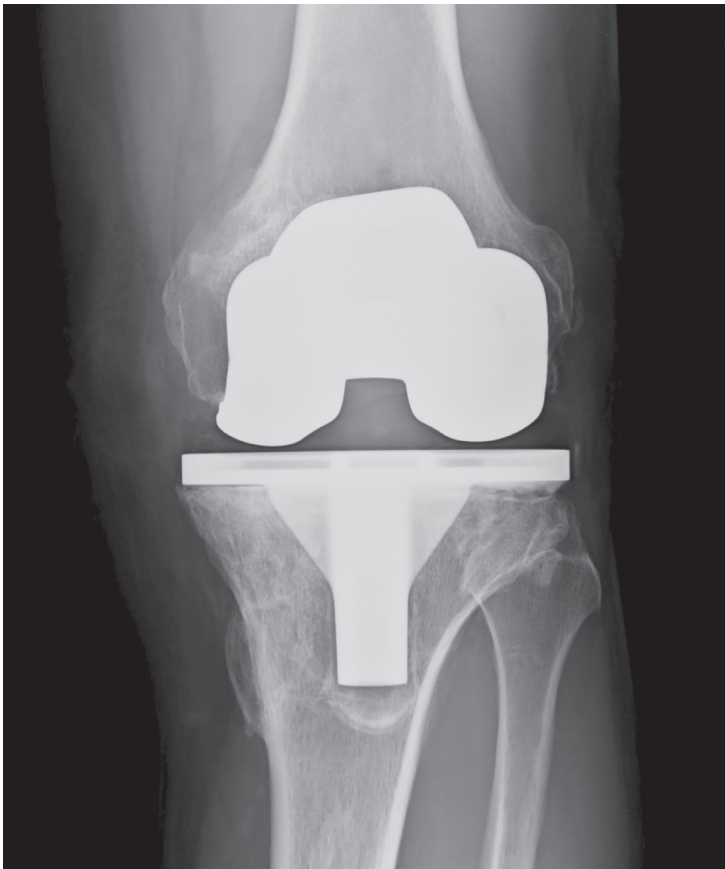
KNEE REPLACEMENT SURGERY

During knee replacement surgery, the damaged joint is replaced with a new artificial joint. A layer of bone is removed during surgery from both the femur (thigh bone) and tibia (shin bone) and replaced with an artificial surface. The back of the patella (kneecap) may also be resurfaced during the procedure. Your surgeon will discuss with you the procedure and can answer any questions or concerns you might have.

Arthritic knee joint



Artificial knee joint, front view



Artificial knee joint, side view



PRE-SURGICAL APPOINTMENTS

Your pre-surgical appointments are part of our commitment to prepare you for the best possible outcomes. We will use this time to gather important information about your health so we can safely care for you. Completing these visits as scheduled will help avoid any delays or cancellations on the day of your surgery.

MEDICAL CLEARANCE

It may be recommended that you have an evaluation with your primary care provider or other healthcare providers prior to surgery in order to ensure you are in good condition to undergo the procedure. These appointments should take place about three weeks prior to your surgery in order to coordinate any further testing and to prevent any delays in scheduling.

PRE-ADMISSION SERVICES

During this visit, you will speak with a patient access representative, pre-admission nurse and a joint coordinator nurse practitioner. Your electronic medical record will be established for your hospitalization.

What to expect during this visit:

- The patient access representative will verify your address, contact information and insurance.
- The preadmission nurse will review your medical history and current medications.
- The nurse practitioner will evaluate you and your risk factors and determine if any further testing may be necessary prior to surgery.
- The nurse and nurse practitioner will ensure all necessary steps are complete for surgical clearance.
- You will have blood work, chest x-ray and/or an EKG .
- Review information about the day of surgery.
- The nurse practitioner will lead your joint education class and answer any further questions that you may have prior to surgery.

PRE-SURGICAL APPOINTMENT WITH YOUR SURGEON

Before your surgery, you will see your surgeon. At this visit, your surgeon will:

- Check your surgical site.
- Review the benefits, risks and alternatives of your surgery and have you sign a consent form.
- Answer any questions that you may have.

Take the time to write down any questions you have for your surgeon, so that you will remember to ask them during your appointment.

Checklist for Pre-Admission Appointments

Please bring the following with you:

- This notebook
- List of all medications, doses or your medication bottles. Please include any over-the-counter medications, vitamins, herbal or other supplements you may be taking
- Primary care provider's name and phone number
- List of your past surgeries
- Be ready to discuss any medical problems including:
 - Heart trouble
 - Kidney trouble
 - Diabetes
 - Cancer
 - Blood clots or bleeding disorders
 - Reactions to anesthesia
 - Allergies to medication or food
- Picture ID
- Insurance cards
- Advanced directives (if you have any)
- Any paperwork you received at previous appointments
- List of questions/concerns you would like to discuss. Feel free to list these in the Notes section of this book

To be filled in by doctor/nurse practitioner:

Medications to stop taking and when

Date and Time of last dose

Medications to take the morning of surgery

Time taken

PREPARING FOR SURGERY

There are many steps you can take in the days and weeks before your surgery to put yourself on the road toward a successful recovery.

ASSEMBLE YOUR SUPPORT SYSTEM

Bring a family member or friend with you to your appointments and class before surgery. You will also want to start thinking about your support system after discharge.

The optimal discharge location is your home with a support system to assist you. Every patient recovers at varying speeds. How much care you will need will depend on how you feel and how well you are moving.

You will need someone to help care for you for a week or two after the surgery. You will also need someone to drive you to therapy and doctor appointments. It is helpful to have your support person present during your therapy in the hospital.

If you have concerns about returning home after your hospital stay please let your surgeon and care team know so can those items can be discussed. For a small number of patients, a short stay at a nursing facility may be needed. If necessary, we can assist you in making these arrangements in conjunction with your insurance company.

PREPARE YOUR BODY

- Good nutrition is important in the healing process. It is important to eat a well balanced diet including fruits, vegetables and lean protein.
- Be sure to drink at least six 8-ounce glasses of fluid each day. These can be water, juice or non-caffeinated soda.
- In the time leading up to your surgery, be sure to keep your bowels regular. This will help prevent problems with constipation after surgery. Constipation is often a side effect of pain medications.
- Make sure all necessary dental work is completed before surgery. For any dental work done after surgery, you must take antibiotics before a procedure to help prevent infection. You will need to do this for at least two years or longer after your surgery. Please consult your surgeon.
- Smoking increases the risks of complications during surgery and recovery. If you need information on how to quit, please ask.
- Please take good care of your skin on the leg to be operated on. Any scratches from things like yard work or pets could lead to a canceled surgery. If you do develop any abrasions or rashes, please contact your surgeon's office.
- Remaining as active as your pain will allow before surgery will keep your muscles strong. Your muscles provide support that you will need to recover after surgery. Recommended exercises are included in this booklet. Please begin these before surgery.

CREATE A RECOVERY ENVIRONMENT AT HOME

- Remove loose throw rugs, which can get caught in your walker. Be careful with slick floors.
- Remove bathmats from all bathrooms.
- Pick up any clutter and clear pathways. Your walker or crutches will take up more room than you are used to.
- If you have stairs, make sure you have a sturdy handrail.
- You may need a raised toilet seat. If it is difficult for you to stand up from the toilet now, it will be more difficult after surgery. A seat with armrests is nice if you do not have a counter close by to steady yourself. You can also have grab bars installed
- Prepare some meals ahead of time and have them in the freezer to make mealtime easier.
- Fill any necessary prescriptions so you can have enough of your daily medication to last you several weeks after your surgery.
- Anticipate what you will be using for ice packs and have them ready (gel packs, ice in a bag, large bag of frozen peas).
- Store frequently used items in an easy to reach place.

PREVENT FALLS – A CHECKLIST FOR YOUR HOME

Falls are often caused by hazards that are easy to overlook. This checklist will help you find and fix those hazards in your home.

When you walk through a room, do you have to walk around furniture and objects stored on the floor?

- Ask someone to move furniture so your path is clear, allowing room for your walker or crutches.
- Keep objects off the floor and stairwells

Do you have throw rugs on the floor?

- Remove the rugs. They can be a hazard, especially when using a walker or crutches.

Is the shower floor or tub slippery? Do you need support when getting up from the toilet?

- Put a non-slip rubber mat or self stick strips on the floor of the tub or shower.
- Have grab bars secured next to toilet, tub, or shower if needed.

Is the path from your bed to the bathroom dark?

- Plug in a night light to help you see where you are walking.
- Place a lamp close to the bed where it is easy to reach.

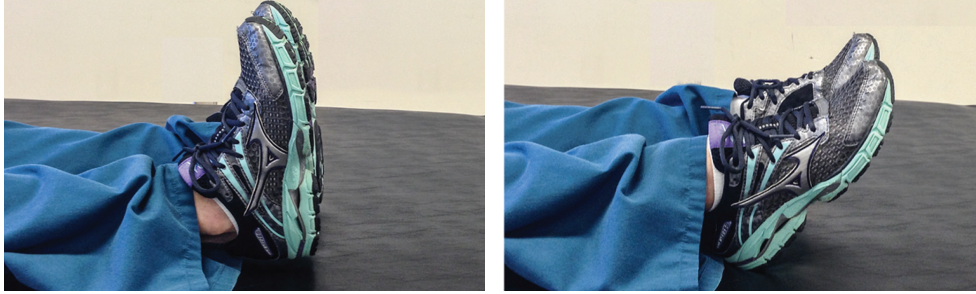
Are the handrails loose or broken? Is there a handrail on only one side of the stairs?

- Fix loose handrails or put in new ones. Make sure handrails are on both sides of the stairs and are as long as the stairs.

Other things you can do to prevent falls:

- Have your vision checked regularly. Poor vision can increase your risk of falling.
- Get up slowly after you sit or lie down.
- Wear supportive shoes both inside and outside the house. Avoid going barefoot or wearing slippers.
- Improve lighting in your home. Florescent bulbs are bright and cost less to use.
- Coil or tape cords and wires next to the wall so you cannot trip over them.

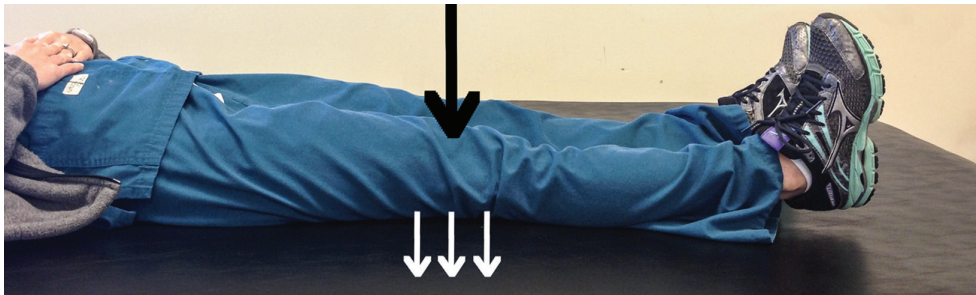
Total Knee Replacement Pre-op Exercises



ANKLE PUMPS

Lying on your back or sitting, bend and straighten your ankles briskly. If you keep your knees straight during the exercise, you will stretch your calf muscles.

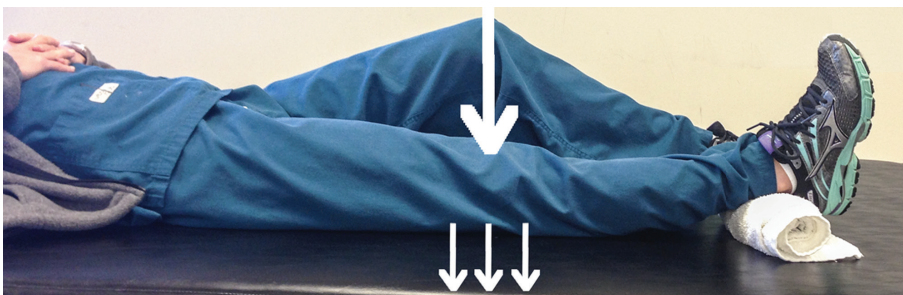
REPEAT 25-50 times, 2 every hours.



QUAD SETS

Lying on your back with legs straight, tighten your thigh muscle and push your knee down firmly against the bed. Hold 5 seconds. Relax.

REPEAT 25-50 times, 5 times per day.



**DO NOT PLACE TOWEL OR PILLOW UNDER KNEE FOR COMFORT WHILE RESTING OR SLEEPING.
- IT MAY FEEL BETTER BUT WILL PREVENT YOU FROM GAINING FULL EXTENSION IN REHAB.**

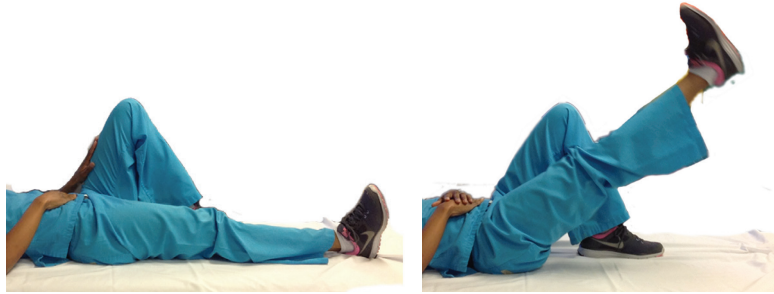
QUAD SETS

WITH TOWEL ROLL UNDER ANKLE

Lie on your back, place a towel roll under your heel. Allow your knee to straighten as much as possible. Tighten your thigh muscle and hold for approximately 5 seconds. Slowly relax.

REPEAT 25 times, 5 times per day.

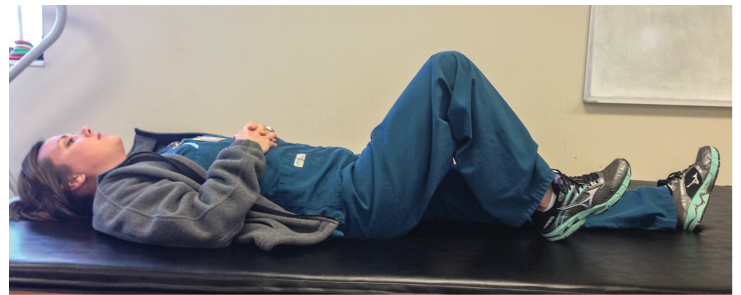
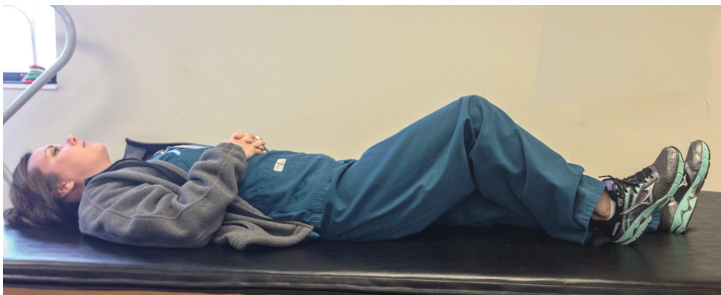
Total Knee Replacement Pre-op Exercises



STRAIGHT LEG RAISES

Lie on your back with one leg bent and the other leg straight, Raise your straight leg off bed 10-12 inches. Hold approximately 5 seconds. Slowly relax.

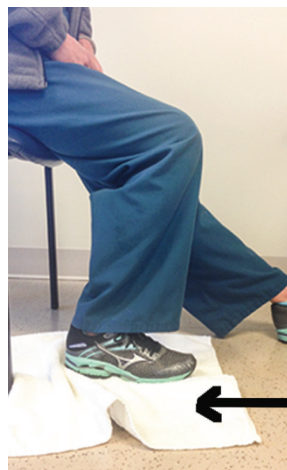
REPEAT 5-10 times, 2 times per day.



HEEL SLIDES

Lie on your back, bend your knee and slide your heel along bed toward your buttocks. Bend your knee as much as you can tolerate. Slowly straighten and lower your leg.

REPEAT 10-15 times, 2 times per day.



HEEL SLIDES

While sitting in a chair or at the edge of the bed, place one foot out in front of you with your other foot on a towel. Gently slide your foot back as far as you can tolerate. Hold for 5 seconds.

REPEAT 25 times, 2 to 3 times per day.

Preparation Checklist

MEDICATIONS:

- Do not take anti-inflammatory medications for seven days before surgery. Examples: ibuprofen, Aleve, Naproxen, Mobic, Celebrex, etc.
- If you take blood thinners on a regular basis, such as aspirin, Coumadin/Warfarin, Plavix, Lovenox, Xarelto, Pradaxa, etc., make sure you have directions from your surgeon and the physician who prescribes the blood thinner about when to stop taking them before surgery.
- If you take medication in the morning for diabetes or high blood pressure or seizure medication, make sure you have directions about how to take them the morning of surgery.

WHAT TO TAKE TO THE HOSPITAL:

- This notebook
- Please wear comfortable, loose fitting clothing, such as pants or shorts with elastic waistband
- Toiletries
- Glasses, contact lenses, hearing aids and/or dentures with the necessary storage containers
- Any inhalers, eye drops, medicated creams, CPAP machine, etc. Please alert the staff if you bring these items to the hospital

THE DAY BEFORE SURGERY:

- Do not eat or drink anything after midnight (unless instructed otherwise by your surgeon). This includes water, gum, hard candy, lozenges, and chewing tobacco.
- Limit alcohol intake and do not smoke for 24 hours prior to surgery.
- Two nights before surgery shower with the special soap provided at pre-admission. Shower again with the soap the night before surgery, and shower again using the soap the morning of your procedure.
- Notify your surgeon if you develop sore throat or fever.
- Get a good night's sleep and set your alarm.

THE MORNING OF SURGERY:

- Shower again with the soap provided at pre-admission.
- Do not apply body lotion, deodorant, makeup or wear contact lenses.
- Do not take jewelry or valuables to the hospital.
- Please arrive at the hospital at the instructed time.

AT THE HOSPITAL

When you arrive at the hospital for your surgery, check in at the admitting desk located at the medical mall entrance to the hospital. From there, you will be taken to a room in our admission unit. A friend or family member is welcome to accompany you to this area.

While you are in AM Admit, you will:

- Meet the nurse who will coordinate your pre-operative care
- Change into a hospital gown
- Start an IV (intravenous catheter) to give you fluids and antibiotics
- Have your surgical site prepared
- Confirm your surgery and have your surgeon mark your surgical site
- Speak with the anesthesiologist and surgical nurse about your surgery

SURGERY

The procedure usually takes around two hours in the operating room. While you are in surgery, friends and family can wait in our surgery waiting room or may be allowed to wait in your room designated for after surgery.

AFTER SURGERY

After surgery, you will be transported to the recovery room. The specialty trained staff will care for you as you awaken from anesthesia.

- Your heart rate, blood pressure, respiratory status and temperature will be monitored closely
- Nurses will assess and treat your pain and any nausea you may experience
- Your surgical site will be covered with a dressing
- You may have a tube for drainage from your surgical site

When you are ready to leave the recovery room, you will be transported to your room on the surgical floor. Your family and/or friends will be able to join you in your room.

The Road Recovery

PAIN MANAGEMENT

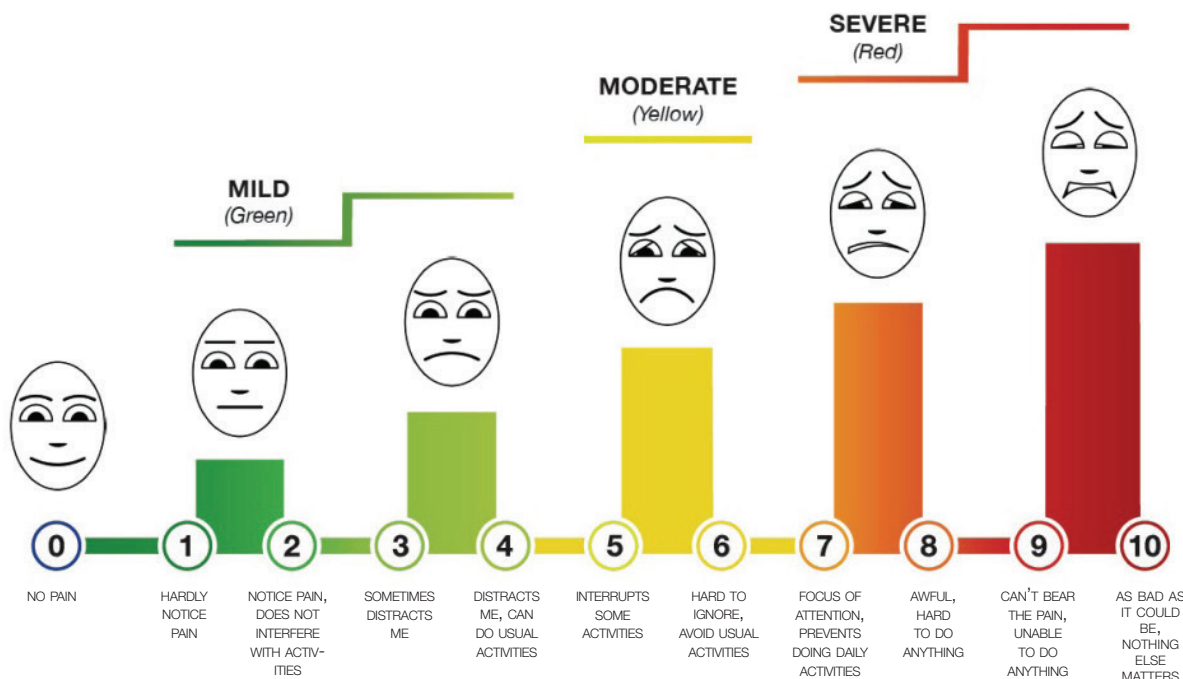
Joint replacement surgery is designed to reduce the amount of pain you are currently experiencing. However, you will experience some discomfort following your surgery as your incision heals and you adjust your artificial joint. Our staff will do everything possible to keep you comfortable. Although not all pain can be eliminated, pain relief medications can lessen the pain you feel after surgery. You should be comfortable enough to participate in your therapy as well as rest effectively. As you progress, you can expect the pain to become less intense.

Communication with your health care team is essential. Please tell your care providers how you feel and how well pain relief measures are working for you. We need to know how much pain you are having when you move, not just at rest. We will discuss options for pain relief and what you can expect from different interventions.

This communication is important in the first 24 hours after surgery. When you first return from surgery you may be surprised at how little pain you are experiencing. This pain relief is a residual effect of the anesthesia you received. How long this lasts depends on the method of anesthesia provided and can vary from person to person. Please let our staff know as soon as you feel discomfort so we can continue to provide effective pain control.

Pain medications can be delivered in different ways. Medications delivered through an IV begin to work quickly but generally do not provide lasting relief. Oral medications provide longer lasting pain control. These drugs are most effective when taken as soon as pain starts. In the beginning you may require a combination of IV and oral medications. When you leave the hospital, you will only take oral medications.

Other effective ways you can help manage your pain include simple relaxation techniques, ice therapy, repositioning and movement.



This is one tool your nurse may use to better understand your pain

MOBILITY

Getting up and moving is probably the most important part of your recovery and the most effective way to decrease your risk of developing a complication after surgery. Mobility aids in digestion, improves circulation and lung health, and decreases pain.

Most people's instinct is to stop doing something when it hurts. However, moving and using your new joint helps in decreasing your overall pain. When you are not moving, your joint becomes stiff, achy and painful. Each time you get up, it will become easier and you will be closer to your goal of recovery. Do not be afraid to use your new joint. Moving and putting weight on it will help healing and will not cause any harm.

Nursing and therapy staff will work with you to get you up and moving. Until told otherwise, always have a member of your healthcare team assist you with activity.

BLADDER CARE

If you have a catheter, your catheter will be removed the day after your surgery. Removing the catheter helps to decrease the possibility of getting a bladder infection. You may be anxious about getting up and going to the restroom, but this is an important step in your recovery. Our staff will assist you to the restroom, or we can provide a bedside commode chair until you are able to walk to the bathroom.

BOWEL CARE

The pain medication you are taking can cause constipation. You will be given a stool softener to avoid this. Other ways to keep your bowels regular are drinking water, adding fiber to your diet and being active. If you have concerns, please let our staff know.

RESPIRATORY CARE

Following surgery, congestion in your lungs may occur, which can lead to pneumonia. To prevent pneumonia, your nurse will instruct you on coughing and deep breathing as well as a device called an incentive spirometer. Getting out of bed also helps your lungs work properly.

PREVENTING BLOOD CLOTS

Blood clots can form when circulation is impaired. There are several ways we will try to work with you to promote circulation:

- If ordered by your surgeon, you will wear elastic stockings called TED hose. TED hose apply gentle compression to your legs to promote circulation and prevent swelling. These should be worn the majority of the day, and nursing staff will assist you with getting them on and off.
- SCD pumps are worn over your socks. They provide gentle alternating compression to your feet. These should be worn at all times except when walking.
- Exercise about every two hours:
 - Start by wiggling your toes
 - Next, pump your ankles up and down
 - Tighten your thigh muscles (quad sets)
 - Tighten the muscles in your buttocks (gluteal sets)

Depending on your personal risk for developing blood clots, you may be prescribed medication in addition to the other preventative measures. Medications that may be prescribed for you include aspirin or other medications commonly called blood thinners. Your surgeon will determine your specific medication. Two commonly used types of blood thinners are injectable anticoagulants:

- Lovenox (enoxaprin)
- Arixtra (fondaparinux)

If you have any questions about what medications you will be taking, please discuss them with your surgeon.

Physical and Occupational Therapy

PHYSICAL THERAPY

Physical therapy (PT) staff will begin working with you the day of surgery to gradually increase your activity. The therapists will teach you an exercise program, how to move in bed, how to get in and out of bed and how to walk with either a walker or crutches. Physical therapists will work with you twice a day. Expect to feel tired, but remember that activity is vital to your recovery.

Here are the activities you can expect:

- **Day of surgery** — Review the beginning exercises and dangle at the edge of the bed. You will take some steps with a walker.
- **Day one after surgery** — We encourage you to wear comfortable clothes. Begin walking to the bathroom once you can walk safely. Sit up for all of your meals. Practice your exercise on your own and with your therapist twice a day. Bend your knee to a 90-degree angle. Get in and out of bed with minimal help. Be instructed on and practice going up and down steps, if you have steps at home. If you have met your therapy goals and are medically stable, you will be discharged from the hospital.

OCCUPATIONAL THERAPY

Occupational therapy (OT) will generally begin the day of your surgery. Your goal in occupational therapy will be to learn how to follow your activities of daily living, including dressing, bathing, using the toilet and getting around your home while maintaining precautions.

Occupational therapists will provide information on helpful equipment, lower body dressing, bathroom and car transfers and will work with you once a day.

Home and Beyond

LEAVING THE HOSPITAL

Together we will create a plan to meet your goals for a safe discharge. The plan will include assisting you in obtaining equipment or other support you may need.

Most patients return home after discharge from the hospital. In order to go home you need to meet the following criteria:

Here are the activities you can expect:

- Be in stable medical condition
- Be able to get in and out of bed with minimal help
- Demonstrate safety while walking on a walker.
 - Be able to navigate stairs if you have them
- Have help at home in order to assist you as needed
- Have your pain managed by oral medications alone

When you do go home you will continue your physical therapy with a home exercise program as instructed by home health physical therapists. This therapy usually starts the day after you are discharged from the hospital. Our staff will assist you in setting up service if you have not already done so.

DISCHARGE INSTRUCTIONS

Throughout your stay, we will instruct you about how to care for yourself when you leave the hospital. If you have any questions or concerns please feel free to ask a member of our staff as soon as possible.

PAIN MEDICATION

Everyone's needs vary as to how much medication and how long they will need to take it. Most people will need to take something the first couple of weeks in diminishing doses. You can try using an over the counter medication such as Tylenol if you would like. We expect you to have

some pain with your therapy, but you should only take the medication when you need it. Also, remember to ice and elevate your leg periodically during the day to help with the discomfort.

POSSIBLE COMPLICATIONS

- Blood clots
- Stiffness
- Loosening of the metal components
- Prolonged pain
- Infection
- Prosthetic wear
- Dislocation

REGULAR FOLLOW-UP APPOINTMENTS WITH YOUR SURGEON

You will be given an initial follow-up appointment with your surgeon when discharging from the hospital.

It is very important that you keep in touch with your surgeon and get periodic x-rays to make sure your joint continues to stay healthy and the metal components are not loosening. How often you need to be seen will be determined by your surgeon, but it will be your responsibility to make those appointments.

DISCHARGE CHECKLIST

I have prescriptions for my new medications including pain medications.

I understand my personal plan for preventing blood clots including any medication and follow-up appointments.

I will wear my TED hose on both legs for six weeks or until instructed by my surgeon.

I understand how to care for my incision.

I understand my personal plan for continuing therapy.

I have, or know how to get, any necessary equipment.

I have arranged for someone to drive me home and help care for me.

I have a follow-up appointment with my surgeon.

Call your doctor if you notice any of the following because it might be a sign of infection:

- Warmth, redness, increased pain or swelling of incision
- Increased clear drainage from your incision
- Any thick, green or foul-smelling drainage from your incision
- Separation of the wound edges
- Temperature above 100° F

Note: Infections elsewhere in your body could cause an infection in the area of your artificial joint. Please consult with your doctor if you develop any signs of an infection.

