Your Guide to **Knee Replacement**

The Christ Hospital™
Joint & Spine Center

Welcome to The Christ Hospital

Thank you for choosing The Christ Hospital for your orthopaedic care. Our mission is to provide you with the finest patient experience, with the utmost commitment to your safety and your satisfaction.
If at any time during your stay, there is anything we can do for you, please do not hesitate to ask.

This booklet will provide you with valuable information regarding preparation for your knee replacement procedure. Please ensure you view our additional resources to learn about what to expect upon your arrival for surgery at the hospital, and what to expect once you have returned home.

To help guide you throughout your joint replacement process, we have a dedicated Orthopaedic nurse navigator. Should you have any questions regarding your Pre-Surgery testing, discharge planning or during your time at the hospital, please contact our Navigator at **513-557-4882**.

Again, thank you for choosing The Christ Hospital for your orthopaedic procedure.

The Joint & Spine Center

The Christ Hospital Medical Center - Liberty Township

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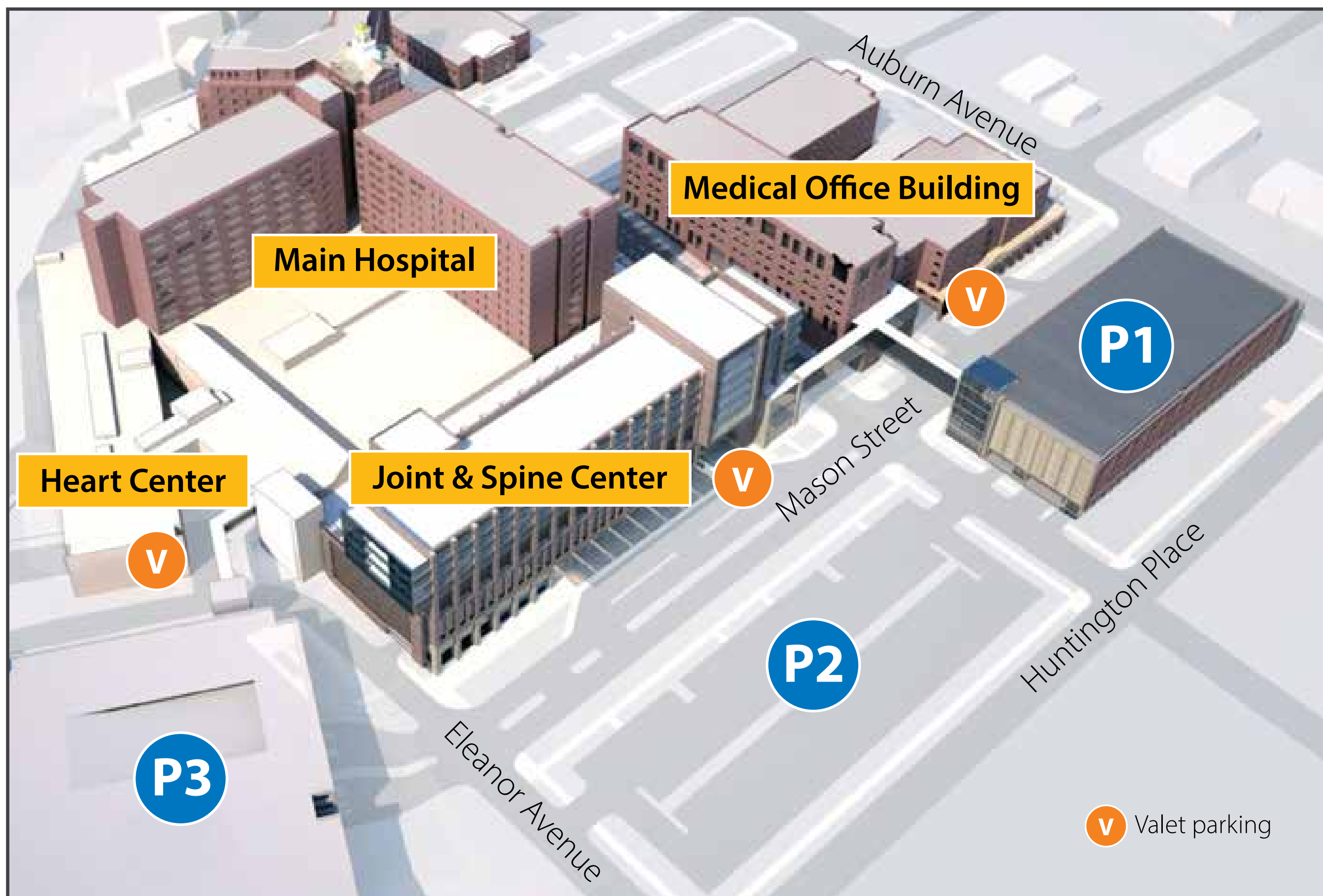
Parking for The Joint & Spine Center

The Christ Hospital offers a number of free, convenient parking options including the P1 and P3 parking garages and P2 parking lot. For easiest access to The Joint & Spine Center, we recommend parking in P1 or P2. To get to either P1 or P2, turn off of Auburn Avenue onto Huntington Place or Mason Street.

In addition to self-parking, valet service is available for a small fee at The Joint & Spine Center and the Medical Office Building at the Mason Street entrances from 8 a.m. to 4 p.m. Please see the valet attendant for assistance.

P1	P2	VALET
PARKING FOR: Main hospital Joint & Spine Center Medical Office Building **ACCESS:** Turn from Auburn Ave. onto Huntington Place or Mason St. From the P1 Parking garage, take the skywalk on Level 1 toward the hospital. Turn left at the end of the skywalk into The Joint & Spine Center. **CLEARANCE:** 8'	**PARKING FOR:** Joint & Spine Center **ACCESS:** Turn off of Auburn Ave. onto Huntington Place or Mason St. From the P2 parking lot, cross Mason St. and enter The Joint and Spine Center main entrance on Level C.	**PARKING FOR:** Joint & Spine Center **ACCESS:** Turn off of Auburn Ave. onto Mason Street and proceed through the first Stop sign. Valet will be on the right in front of The Joint & Spine Center.

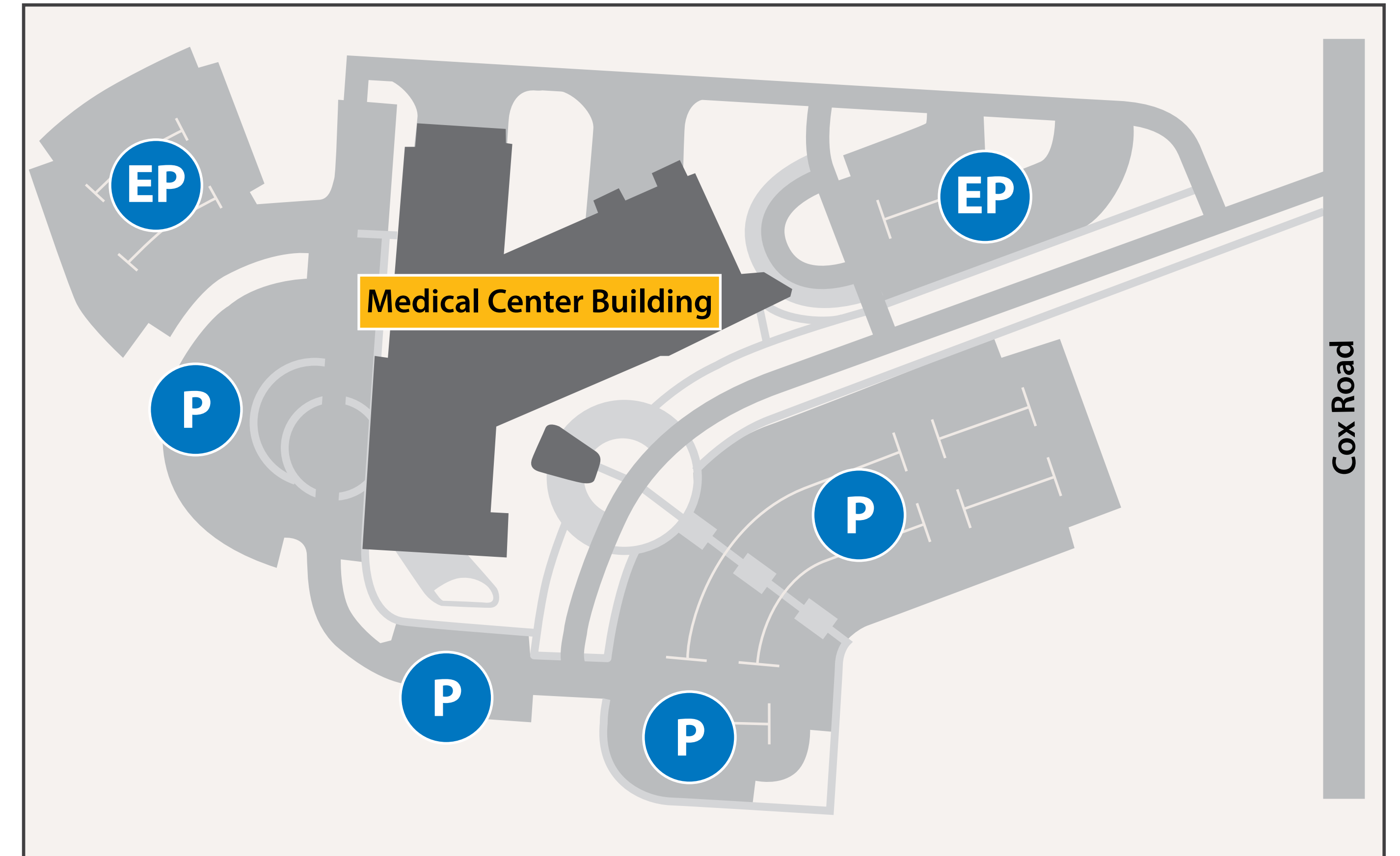
For assistance with directions, contact Patient & Guest Services at
513-585-1200
or visit TheChristHospital.com.



Parking for Liberty Township

Parking for Liberty Township – The Christ Hospital Medical Center – Liberty Township, located at 6939 Cox Road, offers outstanding services and patient experiences to the fast-growing Butler County community of Liberty Township.

The parking at Liberty Township Medical Center is free, convenient, and easy to access. There are numerous parking spaces in a flat lot directly in front of the building, marked on the below image as "P". Additionally, there is a drop off area directly in front of the front doors.



Parking Spaces:

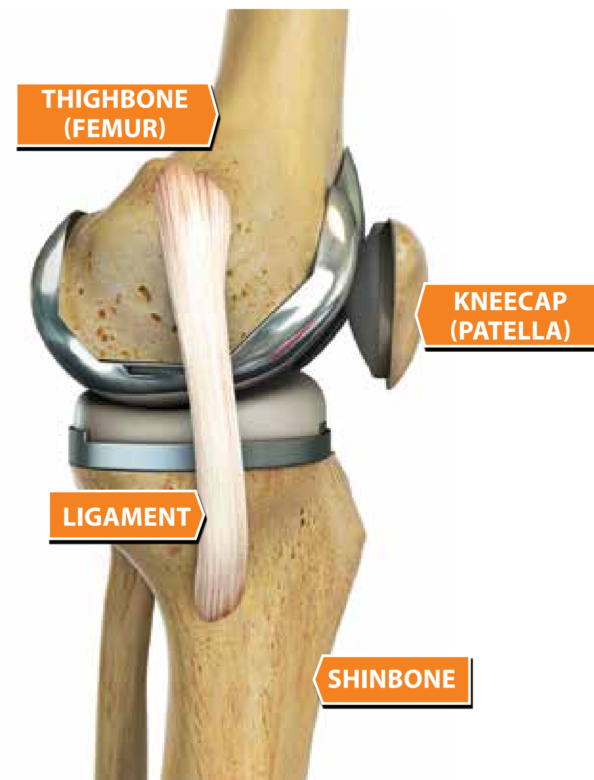
- **P** — **Public parking:** 283 spaces, 28 handicapped parking spaces
- **EP** — **Employee parking:** 151 spaces, 8 handicapped parking spaces

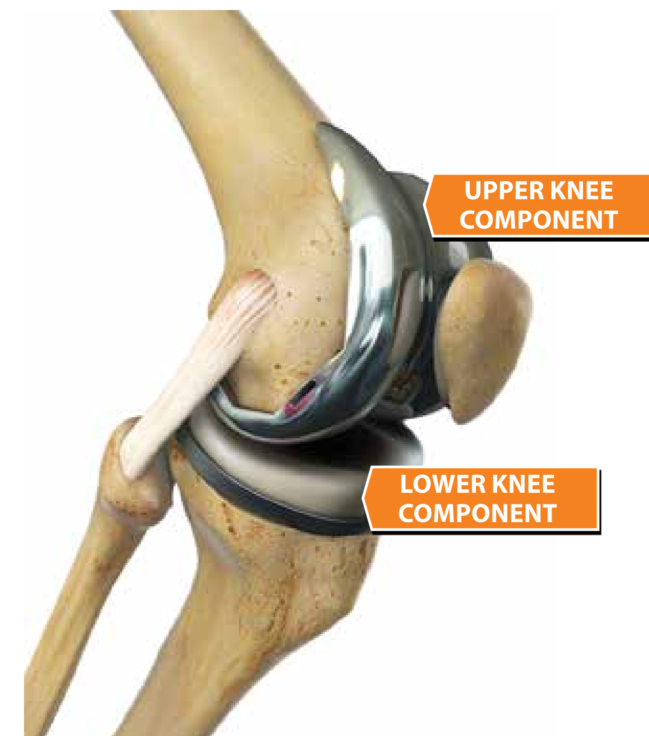
Anatomy of the Knee and Knee Replacement

The knee is the largest joint in your body. Three bones make up the knee as well as strong muscles and ligaments for stability. When your knee is bent or straight, the rounded end of your femur (thighbone) rolls and glides across the flat upper surface of your tibia (shinbone) and your patella (kneecap) attaches to the muscles that allow your knee to straighten.

There is a sac filled with lubricating fluid that surrounds the knee joint and a cushioning layer of spongy tissue called cartilage that prevents your bones from rubbing together. If the cartilage between the bones breaks down, the bones begin to rub together, causing friction, stiffness, and pain. Osteoarthritis, rheumatoid arthritis, traumatic injury, and avascular necrosis (loss of blood to the bone), are all conditions that contribute to deterioration of the bone surfaces.

While in surgery, your surgeon will remove the diseased/damaged bone surfaces by using meticulous instruments. The surfaces of your knee are then replaced with four components including the metal femoral component (thighbone), a metal tibial component (shinbone), a plastic plate to simulate cartilage and a plastic patella to replace the underside of the kneecap.





Pre-Surgery Checklist

Prior to your surgery, there are a number of preparations that you should make to help ensure a positive outcome. Please review this checklist carefully. If you have any questions about this Pre-Surgery Checklist or about your procedure, please contact us at **513-557-4882** or your surgeon's office.

ONE MONTH OR MORE PRIOR TO SURGERY

Confirm the date for the surgery. This date will generally be scheduled through your surgeon's office.

The date of your surgery is ______________________________ at _____________ AM/PM.

Stop smoking. It is important to stop smoking at least one month prior to your surgery. Smoking shrinks arteries, decreases blood flow, speeds your heart rate, raises blood pressure and increases fluid production in your lungs. You will recover faster if you stop smoking prior to your surgery.

WITHIN 30 DAYS PRIOR TO SURGERY

Have a Pre-Surgery office visit with your surgeon to ask questions and see an example of the joint implant that will be used in your surgery. This may be a required visit or an optional visit, depending on your surgeon's requirement.

Attend Pre-Surgery Joint Replacement Class
Call **513-557-4882** or e mail jointcare@thechristhospital.com for a virtual Total Joint Class link.

Pre Surgery PT session
Attend a PT session prior to surgery to learn how to walk with assistive device, how to perform stair climbing and exercises. Your assistive device will be obtained at this visit. Also, you can arrange for your post op therapy. Call to arrange this visit **585-3838**.

Have any dental cleaning or other needed dental work completed
Dental procedures, especially routine cleanings, often result in bleeding of your gums. This can allow bacteria in the mouth to enter the bloodstream. Normally this is not a problem as your body's defenses fight off the bacteria in the blood. However, if you have a new artificial joint, it can become infected by the bacteria that have entered your bloodstream in this manner. While the incidence of infection after joint replacements is very low, this can be a very serious situation if it does. To prevent this from occurring, you should have a thorough dental checkup and cleaning before your surgery. If your dentist recommends any additional procedures these must all be done prior to your surgery as well.

Pre-Surgery Testing

Your Pre-Surgery Testing should be done within 14 days prior to your surgery.

The Christ Hospital will call and schedule your testing appointment. If you need to speak to the scheduler, please call **513-585-2418**. If testing is not completed within 3 business days prior to surgery, the surgery may be delayed.

The Christ Hospital has several Pre-Surgery Testing locations throughout Greater Cincinnati. While some Pre-Surgery testing may be done at your primary care physicians' office or another laboratory, some testing may need to be completed by a Christ Hospital testing facility. In order to streamline testing and minimize the need for multiple testing visits, we recommend patients call the Pre-Surgery Testing Scheduler at **513-585-2418** to coordinate required testing. This should be done after you have been given the date and time of your surgery.

A history and physical should be completed within 30 days of surgery with your primary care provider. If you see a cardiologist, please obtain clearance from that physician as well.
A current medical history and physical examination are necessary for you to receive an anesthetic. Diseases such as diabetes and heart disease do not keep you from surgery, as long as they are under control.

The physical may include an electrocardiogram (EKG) of your heart beat if medical indicated or an insulin dependent diabetic, and an analysis of blood and urine specimens. There is no special preparation for the tests. You should eat normally and take your current medications the evening before and the morning of your tests. Based on your age and medical condition additional tests may be requested.

Occasionally special X-rays or CT scans may be required prior to your surgery.

As results come in from your lab tests, a copy is sent to your surgeon's office. If there are any abnormalities that need medical attention, your surgeon's office will contact your medical doctor. Changes in EKG's may require a consultation with a cardiologist before an anesthetic can be given. For this reason, it is a good idea to have your tests done earlier rather than within a day or two of your surgery.

Blood Type/Screen tests must be performed at a Christ Hospital testing facility prior to the day of surgery. Note, a Christ Hospital physicians' office does not qualify as a testing facility.

Nasal Cultures must be completed prior to the start of surgery. We prefer this test to also be done at a Christ Hospital testing facility.

Some conditions may make the risk of joint surgery too great (chronic infection or a recent heart attack or stroke). If you have any infection, (including bladder, prostate, kidney, gums, skin ulcers, or ingrown toenails) it should be treated and cleared up before undergoing joint surgery.

If you have multiple medical problems or a history of difficulty following anesthesia from a previous operation, your surgeon may ask that an anesthesiologist evaluate you prior to your day of surgery. In this case you would be scheduled for an anesthesia consult with your Pre-Surgery testing.

Inpatient/Outpatient Surgery Status
Many insurances are requiring total knee surgeries to be performed in an outpatient status. If you meet the discharge criteria, patients will go home the day of surgery. If you have not met the discharge criteria, you will spend the night in the hospital. Having a surgery performed in an outpatient status, can effect patient's financial responsibilities. If you have questions about your financial responsibilities with your surgery, contact Financial Counselors at **513-585-0700**.

Medications

- If you are taking blood thinners (including Aspirin, Coumadin/warfarin, anti-platelet aggregates or other prescription and non-prescription medications-such as Vitamin E and fish oil) obtain instructions from your cardiologist or primary care physician regarding discontinuing the use of these medications temporarily, prior to surgery.
- You may continue to take prescription pain medications, with the exception of non-steroidal anti-inflammatory drugs (NSAIDs).
- Seven days prior to surgery you should stop taking NSAIDs (excluding Celebrex)
- If you have a history of pulmonary emboli, deep vein thrombosis, or allergy to aspirin, discuss with your surgeon which blood thinner will be given at discharge. We recommend you contact your insurance company or ask your pharmacist about the coverage of these medications as some of these medications may be expensive. If you have any concerns after the conversation with the insurance company or pharmacist, contact your surgeon's office.

Discharge Planning

- Review and perform recommended exercises prior to surgery. See page 20.
- Prepare your home for returning home after surgery. See page 13.
- If you need assistance preparing for post-surgery care, please see "Pre-Surgery Planning for Your Discharge" on page 12.
- A Case Manager may contact you prior to your surgery to discuss discharge needs.

ONE WEEK PRIOR TO SURGERY

- Anticipate being discharged as soon as you meet your goals, which should be the day of surgery. Please make arrangements for transportation accordingly. If you own your walker, have it in the car for the arrival home.
- Report important observations or changes in your health. If you have any changes in your physical condition such as a fever, sore throat, abscess, persistent cough, ulcer, nausea, vomiting, diarrhea, and you question your readiness for surgery, consult your primary care physician to assess and treat.

If there is an important change to the skin or a rash where the surgery is to be performed, notify the surgeon's office as soon as possible. An important change would be an open draining wound or a localized area with swelling, redness, heat, tenderness to touch, pain or pressure.

TWO DAYS PRIOR TO SURGERY

- Take necessary measures to ensure a good bowel movement the day before your surgery. If you have no history of bowel problems, you can typically assure this with your diet. You may take a laxative or suppository of your choice two days before your scheduled surgery if you tend to need this type of treatment regularly, or on a periodic basis. Over-the-counter products are sufficient. The majority of people do not need to give themselves an enema. After your surgery, you will be given liquids and food as your stomach allows. Most people are back on a regular diet the day of surgery.
- Do not drink any alcohol for 48 hours prior to surgery, as this delays emptying of the stomach.

DAY BEFORE SURGERY

- Make sure you drink 8 glasses(2 quarts) or more of fluids, such as Gatorade or a similar product, preferably not just plain water unless instructed otherwise. Do not drink red or orange colored liquids or jello.
- You may eat a snack before you go to bed if it is before midnight.
- DO clean the surgical area and your body from the shoulders down with Hibiclens soap. You do not need to use Hibiclens on your face, hair or genital area.
- DO NOT drink alcohol, including beer or wine.
- DO NOT shave the surgical area at home.

DAY OF SURGERY

- DO NOT smoke.
- DO NOT chew gum.
- DO NOT eat any type of hard candy.
- You may have clear liquids up to four hours prior to surgery time. Do not drink red or orange colored liquids or jello.
- Medications may be taken as instructed by the hospital assessment nurse on the morning of surgery. If you are on medication for high blood pressure, your heart, or asthma and have not received instructions, please call The Christ Hospital assessment nurses at **513-585-1720**.
- The morning of surgery, shower your body again, including the surgical site before going to the hospital with the Hibiclens.
- Wear comfortable loose fitting clothes.
- Leave valuables, including jewelry, at home.
- If you have an insulin pump for diabetes, bring in your supplies on the day of surgery.
- Bring only necessary personal items with you to the hospital.
- Go to the Same Day Surgery Check-in desk located on B-level of the Joint and Spine Center. At Liberty campus, check-in for surgery is on the second floor. Plan to arrive at the time your surgeon's office indicated. Generally, this is two to two and a half hours prior to the scheduled start of your surgery.

Surgery and Your Current Medications

A Pre-Surgery Assessment Nurse will call you to review your medications and instruct you regarding what medications may be taken the morning of surgery or may need to be discontinued. Written instructions will also be given at your Pre-Surgery Testing visit or faxed to your primary care physician if that is where your Pre-Surgery Testing is being done. You can reach the Assessment Nurses at **513-585-1720**.

If you see a specialist, such as a cardiologist, pulmonologist, oncologist, endocrinologist, you will be asked to check with them before discontinuing your medications. It is important to check with your primary care physician or cardiologist before discontinuing, blood thinners and anti-platelet medications.

Traditional non-steroidal anti-inflammatory medications (NSAIDs - pronounced EN-seds) should be stopped seven days prior to your surgery. The Cox-II non-steroidal (i.e. Celebrex) does not need to be stopped. It is very important that you read the labels of your medications carefully to be sure you know the ingredients of each. Sometime medications may be labeled by their commercial names and some by their chemical (generic) name. These medications can be re-started as directed by your surgeon.

If you are on a prescription pain medication, you will likely be able to continue taking that prescription medication until the day of surgery. Acetaminophen (Tylenol) is the only over-the-counter pain medication which is safe to take one week prior to your surgery.

Aspirin or aspirin-containing drugs such as Percodan, Excedrin, or Anacin, should be stopped seven days prior to your surgery. It is very important that you read the product label carefully. If it contains aspirin, acetylsalicylic acid (ASA), or any form of salicylate, it meets the criteria to be stopped. Vitamin E and fish oil supplements should also be stopped seven days prior to surgery.

MEDICATION LIST

Please make a list of all medications you are taking, including over-the-counter medications, vitamins and/or supplements and bring this list with you to the hospital on the day of your surgery. Please include in this list:

- Medication name
- What is the dosage? How many pills do you take?
- What time do you take your medication? How do you take your medication?
- Why are you taking this medication?
- Name of physician that prescribed this medication?
- How long have you been taking this medication?

Diabetes and Surgery

BEFORE SURGERY

Managing your diabetes prior to surgery is important. Controlled blood sugars can improve healing and prevent some surgical complications. In order to determine if your diabetes is well controlled, your physician may order a blood test called hemoglobin A1C (A1C). The A1C is a blood test that measures your average blood sugar over the last two to three months. The American Diabetes Association recommends an A1C of 7% or less. Discuss your A1C results with your physician.

Tips to help you control your diabetes include:

- Take your medications as prescribed
- Eat three healthy balanced meals
- Be aware of portion sizes
- Eat whole fruit instead of drinking fruit juice (Balance fruit with protein)
- Avoid high sugar drinks such as: Gatorade, Kool-Aid, regular soda, lemonade, sweet tea
- Limit high sugar foods such as: cakes, cookies, candy, ice cream
- Be physically active (Recommend: 30 minutes 5 days a week)
- Monitor your blood sugar and discuss results with your healthcare provider

Prior to surgery a nurse will call to discuss your diabetes and medications. It is important for the medical team to know what type of diabetes (type 1 or type 2) you have. It is also very important you provide detailed information about your diabetes medications and/or insulin or insulin pump/ insulin delivery device. This information will assist your physician during and after surgery to better manage your diabetes.

Make a list of all your diabetes medications and /or insulin. Include the following details:

1. Name of oral diabetes medications and/or insulin
2. Dosage of oral diabetes medication and/or insulin
3. Schedule for taking your oral diabetes medications and/or insulin
4. Manufacturer of Insulin Pump/Insulin Delivery Device and type of insulin

Medication instructions on the day of surgery:

- Ask your physician if you should take your diabetes medications prior to and on the day of surgery.
- If you take insulin, you should ask your physician if the dose will be different prior to and on the day of surgery.
- If you have an insulin pump, you should ask your physician if the insulin pump settings need to be adjusted. If you have insulin delivery device ask your physician if you can use your device during surgery.

Note: Occasionally, before/after joint or spine surgery you physician may prescribe a steroid type medication. Steroids can affect your blood sugar by making them high. Your physician will be monitoring and treating your blood sugar as needed.

DAY OF SURGERY

Your blood sugar will be monitored prior to and during surgery. If your blood sugar is higher than normal your physician may order insulin. Insulin may be administered by injection or through your IV.

AFTER SURGERY

The stress of surgery and being in the hospital may have an affect your blood sugar.

Our goal is to check and treat your blood sugar often in the day to help keep it as normal as possible. Normal blood sugar levels can help you recover from your illness quicker, improve surgical healing and experience a shorter hospital stay.

- In order to provide good blood sugar control, your home treatment plan may not be used during your hospital stay.
- If you are currently taking pills for your diabetes, they will be stopped and you will receive insulin while you are in the hospital. National research supports stopping your oral medications and using insulin. Research has shown that using insulin in the hospital setting can help provide safe and rapid control of high blood sugar levels.
- Your blood sugar will be checked frequently
- You will be asked to let your nurse know when you are going to eat a meal so your blood sugar can be checked and insulin can be given to you at the right time.
- You may receive more than one kind of insulin.
    - Rapid acting insulin (Humalog) is given before meals. It works fast to control your blood sugar after eating.
    - Long acting insulin (Lantus) is given daily. It works slowly to control your blood sugar throughout the day and night when you are not eating.
- If you feel shaky or sweaty, at any time, call your nurse or patient care assistant right away. These signs may mean your blood sugar level has dropped below normal. In order to find out if your blood sugar is low, the nursing staff will check your blood sugar and will provide treatment if needed.

If you are given insulin in the hospital, you may or may not have to use it at home. Ask your doctor if your home diabetes treatment plan will change. If you go home on insulin, you will be taught about your insulin plan and allowed to practice giving an insulin injection before you are discharged.

If you have an insulin pump or an insulin delivery device your physician may allow you to use your pump or insulin delivery device during your hospitalization. To safely use your pump or insulin delivery device during hospitalization you should be prepared to provide insulin pump manufacturer, type of insulin and insulin pump settings. Insulin pump/Insulin delivery device supplies are not available in the hospital. In order to use your insulin pump you must bring your own pump or insulin delivery device supplies to the hospital.

Additional diabetes information is available upon request. Diabetes educational videos are available on you room TV. You may request the inpatient diabetes educator to meet with you and your family. Please speak to your nurse or physician about making a referral to the inpatient diabetes educator.

Pre-Surgery Planning For Your Discharge

Discharge planning should begin prior to admission since most patients are discharged the day of surgery. Your surgeon, along with your health care team, will assist you in determining your physical therapy needs at discharge.

Once you are discharged from the hospital, your surgeon will determine if additional physical therapy is needed. If your surgeon determines additional physical therapy is needed, there are three basic options for physical therapy:

- Outpatient physical therapy
- In-home physical therapy
- Inpatient physical and occupational therapy in a skilled nursing or rehab facility

OUTPATIENT PHYSICAL THERAPY

Early outpatient physical therapy is generally preferred. This can be done at a Christ Hospital Physical and Occupational Therapy Center in your area. If one of our locations is not convenient or you have a relationship with a therapist, an alternate location is acceptable. Physical therapy should begin as soon as possible after discharge and continue two to three times per week as indicated by your physician.

You may book your first outpatient therapy appointment prior to surgery to assist you with obtaining a ride.

HOME BASED PHYSICAL THERAPY

If transportation is not practical for outpatient PT or your physical therapist recommends home PT, home therapy can be arranged for you. Your Case manager will assist with these arrangements if you are home bound. Home therapy is usually 2–3 times per week for 1–2 weeks or until mobility allows you to travel to outpatient PT.

SKILLED NURSING OR REHAB FACILITY

While the majority of total joint replacement patients return directly home after surgery, some patients may need a short stay in a different setting in order to continue with daily therapy. There are two levels of inpatient care available after discharge if needed. The two levels of care are:

1. **Community based Skilled Nursing Facilities - **Most orthopedic patients who need additional inpatient care do well with a short stay at a skilled nursing facility. At the facility, occupational and physical therapy is available as well as nursing care.
2. **Inpatient Acute Rehab Care -** This type of care is for patients who have more complex rehabilitation needs, often with additional complicating medical conditions. The Christ Hospital rehab unit meets this description.

Insurance coverage may limit your skilled nursing facility and rehab options or specify a particular agency or facility. You may wish to contact your health insurance carrier prior to admission to clarify the benefits of your policy.

The Orthopaedic Social Worker will be happy to speak with you for discussion about skilled nursing and rehab facility needs prior to surgery. Please contact **513-585-2734**.

If spending the night in the hospital and returning home, a Case Manager will meet with you during your stay and assist with your home discharge needs. See page 24 for more information.

DURABLE MEDICAL EQUIPMENT

Most patients will need to use durable medical equipment such as a rolling walker, crutches or cane for mobility at the time of discharge. If you have durable medical equipment at home or are planning to borrow it from a friend or family member, try to obtain it prior to surgery. You should assess the equipment to ensure it is sturdy and in the case of a walker, that it has wheels, is wide enough for you and is the correct height and weight.

If you do not have durable medical equipment to use at discharge, a Christ Hospital employee or case manager will assist you with ordering your equipment for returning home while you are a patient in the hospital as recommended by your therapist. Your insurance company may or may not cover all of your durable medical equipment recommended needs. You can check with your insurance company about durable medical equipment coverage before your surgery.

PREPARING YOUR HOME

For your safety, we recommend the following, if they apply to your situation:

- Remove all throw rugs out of your path.
- Remove all footstools, plant stands and other low floor items.
- When you get home, keep pets in another area of your house until you are settled.
- Remove or tape down any cords or wires in your walking path.
- Have a non-skid mat for inside and outside of the shower.
- A handrail is recommended if you have steps leading into or in your house.
- Have a chair with arms for getting up and down easily. Recliners, soft chairs, rocking chairs, and low sofas can be difficult to get out of depending on your height.

Additional considerations that make your return to home more convenient:

- Move things you might need (magazines, medications, phone, cooking utensils) so you can reach them easily.
- Have the supplies you need at home and ready for use.
- Have an oral thermometer available.
- Have telephone numbers by each phone in case of an emergency. Have paper and pencil by the telephone to take messages and your calendar for noting the timing and dosage of your medication when you come home.
- Have a telephone near you in your living area and by your bed.
- If your bed is on a separate floor from the bathroom, you may want to consider having a bed temporarily located on the same floor as the bathroom or using a bedside commode. Please note, stairs are allowed to be performed at time of discharge.
- Place night lights in the hallways or have a flashlight handy for nighttime trips to the bathroom.
- Have some nutritious meals or frozen dinners available ahead of time.
- Be prepared to rest completely for at least one hour, two times each day. Part of this time is with your feet higher than your heart. You should not allow phone calls or visitors during rest periods.
- An apron with pockets is useful to carry small items around the house.
- Have Tylenol, stool softeners, and laxative available at home.

What to Bring to the Hospital

On the day of surgery, bring only what is essential for that day, including:

- Medical insurance card(s) and prescription card
- A list of your medication(s) including the name of each medication, dosage and frequency.
- Do not bring your own medications, unless instructed to do so by the Pre-Surgery Assessment Nurse.
- Copy of Advanced Directives (if you have them)
- Insulin pump and supplies
- CPAP and supplies

If your surgery requires a planned hospital stay, we recommend you ask your family or friends to bring your personal belongings to your room later in the day.

What to Expect On the Day of Surgery

On the day of your surgery, please go to the Joint & Spine Center and proceed to the Same Day Surgery Check-in desk located on Level B at the time your surgeon's office requested that you arrive. If your procedure is scheduled at Liberty Township campus, proceed to the second floor. If you have family or friends accompanying you, they will be provided a pager and additional information regarding how to read the patient tracking system.

Upon check-in, you will be escorted to a private room on the Same Day Surgery unit to be prepared for surgery. If you choose, your family or friends may accompany you to your room. While here, you will see several staff members, including nurses, your surgeon, the anesthesiologist and other patient care assistants. To ensure your identity and safety, each staff member will ask you a series of questions:

- What is your name?
- What is your date of birth?
- Do you have any drug allergies?
- What are we doing for you today?

During preparation for your surgery, an IV will be started, a nurse will scrub the surgical site with Chlorhexadine wipes, you will be given a mild sedative if ordered by the anesthesiologist as well as medication to prevent nausea and vomiting if indicated. Your surgeon will also mark the area where you are to have surgery. When you go into the operating room, the surgical team there will again ask you the same series of questions. Just before the incision is made, you will be given an antibiotic through your IV, which given directly before the start of surgery has been proven to prevent surgical site infections.

Once you are taken to the operating room, your family and friends will be directed to the Family Surgical Lounge. When your surgery has been completed, your family will be paged and your surgeon will meet with them to review the results of your procedure.

ANESTHESIA

You will meet your Anesthesiologist on the day of your surgery. Prior to this time your history and physical exam and any important information about you have been reviewed. Questions and concerns about your anesthesia or previous anesthesia experiences can be discussed with the Anesthesiologist during preparation for your surgery, on the Same Day Surgery unit. The Anesthesiologist will likely order a mild sedative prior to surgery and other medications to help prevent nausea after surgery.

PAIN MANAGEMENT

Your surgeon may request an Anesthesiologist administer a pain block before surgery or your surgeon may choose to give you a peri-articular injection during surgery. Expect some discomfort following surgery, but with the current pain management modalities, we can greatly reduce the amount of pain you feel following total joint replacements. Relieving your pain allows you to increase your activity and participate in physical therapy. This is an important step towards a faster recovery.

Your surgeon will select one or more of the following pain management options for you:

Peripheral Nerve Blocks

An injection with local anesthestic may be placed near the nerve in your mid thigh with use of an ultrasound machine. You may receive one of these injections depending on your joint surgeon's preference. This block will numb a specific nerve.

Peri-articular injection

Your surgeon will inject numbing medication around your new joint with other medications to help control your pain.

Combination

Your surgeon may use a combination of numbing medication from a peripheral nerve block and a peri-articular injection to help control your joint pain.

Spinal

A spinal anesthesia may be given for the surgery. This will keep you numb from the waist down for a couple of hours. This may be used instead of general anesthesia. The Anesthesiologist will also give you medication through the IV to keep you sleepy.

POST-ANESTHESIA CARE UNIT (PACU)

Following surgery, you will be taken to the Post-Anesthesia Care Unit (PACU) where you will remain for approximately two hours. Many people feel cold when they wake up from surgery, so warm blankets are available if you need them. Monitors will be applied to measure your blood pressure, heart rate and rhythm and breathing. An X-ray may be taken to check your surgery. If you experience pain tell the nurse so that they are able to help manage that pain to ensure it is tolerable for you. While you are in PACU, your family will be updated on your progress.

Once your vital signs are stable and your room is ready, you will be transferred to a room to continue to recover until you are ready for discharge to home.

MEDS TO BEDS

YOUR PRESCRIPTIONS DELIVERED TO YOUR BEDSIDE!

Why stop at the pharmacy on your way home? The Christ Hospital's retail pharmacy, located on Level 1 of the Joint & Spine Center, can fill your prescriptions before you leave and deliver them to your room!

- Payment for your prescriptions will be processed at your bedside
- No waiting at your local pharmacy to fill your prescription on the way home
- We will work with your insurance company to address and resolve issues, such as prior authorization requirements, which can delay starting your medicine
- Pharmacists are available at your bedside or by phone to answer any questions you may have about your medications, including common side effects.
- The service is FREE!

What about refills?

If you need a refill and would like to pick that up at your local pharmacy, transferring the prescription is easy. Simply take your prescription bottle to your local pharmacy and ask them to transfer the prescription. We'll do the rest!

Available Monday – Friday, 9 a.m. – 4 p.m.

If you would like to have your prescription filled and delivered to your bedside, please tell your nurse or call 513-648-7600.

FREQUENTLY ASKED QUESTIONS

Can my prescription be put on my hospital bill?

Unfortunately, no, we are not able to add the cost of the prescription to your hospital bill.

Do you accept my prescription insurance plan?

We accept most prescription insurance plans and will directly bill your insurance provider. You are responsible for any co-payment required by your insurance at the time of prescription delivery.

What type of payment is accepted?

We accept cash, credit cards, checks and flexible spending cards and will process your payment at your bedside when we deliver your medications.

What if I do not have my prescription insurance card?

No problem. By answering a few simple questions, we will be able to obtain this information.

PREPARING FOR PATIENT DISCHARGE

All knee replacement patients will need a ride home from the hospital. The anticipated discharge time for your family member is when you meet your discharge criteria or 11 a.m. if you stay overnight. Your family member will have to reach certain goals before leaving the hospital. If these goals have not been reached, your family member may need to stay longer into the day.

What to Expect Right After Your Surgery

Post-Surgical Pain Management

Because patients may feel very little pain after surgery, some may feel comfortable moving around shortly after surgery. It is very important that you NEVER get up by yourself, ALWAYS ask for assistance. While you may not feel significant pain, your joint has undergone considerable trauma and medications may also make you feel lightheaded and dizzy. If you get up without assistance, you will fall. YOU DO NOT WANT TO FALL.

The key to getting the best pain relief is talking to your surgeon and nurses about your pain so they can help you manage your pain while you are in the hospital. The goal is to stay ahead of the pain - don't let the pain get ahead of you! Pain medication administration is based on your pain rating.

Repositioning your leg and cold therapy can also help alleviate pain.

After discharge you may need to take pain medication prior to going to outpatient therapy. As your surgery heals, your pain will improve and you will take less pain medication over the next couple of weeks until you won't need pain medication any longer.

EATING AGAIN

You will be returned to your normal diet gradually after surgery. You will be started on a liquid diet then advanced to a regular diet later in the day. A good diet is important to promote the healing process. Drink plenty of fluids to keep your kidneys flushed and your bowels regular.

Classic Cuisine

If staying overnight after surgery, meals may be ordered daily between 6:30 a.m. to 9 p.m. and will be delivered within 45 minutes of order placement. If you have any questions about this service during your stay, please dial **5-2100** from your room phone to speak to a Classic Cuisine Ambassador.

DRESSING

You will be instructed on when your dressing can be removed. Your incision may be covered with a waterproof dressing before you go home from the hospital. You may shower with this dressing. Specific instructions on how to care for your incision will be given at discharge by the nurse.

PREVENTING RESPIRATORY COMPLICATIONS

Deep Breathing and Coughing

Your lungs consist of many air sacs, which get larger when you breathe. When awake we periodically take a deep breath and blow off extra fluid from these tiny air sacs. When you are sleeping more because of the anesthesia and pain medications, you do not take these deep breaths. Fluid and mucus tend to build up in the air sacs. If allowed to collect, pneumonia can develop and slow down your recovery. After surgery you must make a conscious effort to "deep breathe and cough" to help prevent postoperative pneumonia.

PREVENTING BLOOD CLOTS

After total joint replacement surgery, clots, called deep vein thromboses (DVT) may form in the leg veins. In rare cases, these clots travel to the lungs where they may cause additional symptoms. To prevent and reduce the incidence of clot formation, mechanical devices (foot or calf pumps) are used while you are in the hospital to squeeze the leg muscles, thus maintaining blood flow in the veins. Also, a medication to minimize clot formation, such as Coumadin, Eliquis, Lovenox, or Aspirin, will be prescribed and you will have thick white support stockings on after surgery. These stockings are used to help compress the veins and decrease the chance of blood clots. You will continue to wear these upon discharge.

Leg Swelling

Following Knee Replacement, most patients develop swelling in the operated leg. Although the amount of swelling can vary from patient to patient, the swelling itself, in the leg, knee, ankle, or foot, is normal and may be accompanied by "black and blue" bruising that will usually resolve gradually over several weeks. Bruising typically does not show up immediately after surgery, it may take 5-7 days.

For the first month after your operation, prolonged sitting with your foot in a down position tends to worsen the swelling. You should not sit for more than 30 to 45 minutes at a time. Periods of walking should be alternated with periods of elevating the swollen leg. When elevating the leg, the ankle should be above the level of the heart. Lying down for an hour in the late morning or afternoon helps reduce swelling.

To prevent or reduce leg and ankle swelling:

- Elevate operated leg
- Avoid sitting for more than 30 to 45 minutes at a time
- Perform ankle exercises
- Apply ice for 20 minutes a few times a day (before and after exercises)

MEDICATIONS

If you develop a fever, you may take Regular Strength Tylenol (acetaminophen). Please note, the majority of joint replacement patients run a temperature up to 99.5 or even 100 degrees in the first few days after orthopedic surgery. If your fever rises above 101 degrees, it starts to be a source of concern and you need notify your surgeon.

You may be given antibiotics to prevent infection.

Some people experience nausea from extensive bone surgery, as well as from the anesthetic or pain medication. If this occurs, there are medications to help reverse this effect.

COLD THERAPY EQUIPMENT

An ice wrap or ice pack, as prescribed by your physician, will be applied after surgery to your surgical site. If ice wrap therapy is ordered, cold gel packs will be exchanged approximately every four hours. Please take home all four gel packs and the wrap at discharge.

FALLING AFTER SURGERY

Certainly, no one plans on falling, but orthopedic surgery patients are the most common type of patient to suffer a fall while in the hospital. Falling after joint replacement surgery can be very dangerous and will likely cause a major setback in your recovery. Falls most often occur when a patient tries to get out of bed or a chair without help. **It is very important that you do not get out of bed, out of the chair, or even off the toilet without assistance!** Please use the call light and wait for help prior to getting up in the hospital. Take your time when sitting up and sit for a moment before standing. If you wear glasses, make sure you have them on and are wearing non-skid slippers or shoes when walking.

ACTIVITY

The hospital staff will get you up on the day of surgery. The therapist will remind you about the amount of weight to put on your operated leg. Usually you can put as much weight as is tolerated. If your weight-bearing is limited, your surgeon will instruct you when you can put more weight on it. Generally, this decision is made after follow up X-rays and evaluations.

DISCHARGE GOALS

In order to be discharged, certain goals must be met to ensure it is safe for you to return home. These goals include:

- Ambulate with staff
- Able to climb stairs
- Tolerating liquids
- Urinating
- Tolerating your pain medication by mouth
- Vital signs are stable
- Stable lab results, if ordered

Physical Therapy

To help promote a speedy recovery and to help prevent problems after surgery, there are some routines and exercises that you will be taught and are necessary for you to continue at home.

Physical therapy will help you develop the strength and range of motion necessary to get in and out of bed, walk and climb steps. A physical therapist will assess you after surgery if ordered by your physician.
It is important to let staff know if you have numbness or tingling in your leg before standing. They will remind you about the amount of weight to put on your operated leg as instructed by your surgeon. Usually you can put as much weight as is tolerated. Initially, you will be instructed in walking with a walking aide, such as a rolling walker, crutches or cane. Prior to discharge, physical therapy will instruct you in exercises and techniques to develop your strength and range of motion, even at home. If your weight bearing is limited, your surgeon will instruct you when you can put more weight on your leg. Generally, this decision is made after follow up x-rays and evaluations.

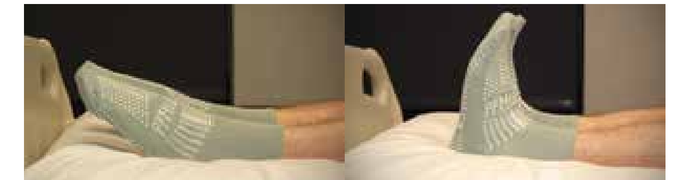
During physical therapy you will experience some discomfort during the therapeutic exercises and walking training. This is normal. The exercises and mobility should become easier and more comfortable each day as you get more familiar with how to move, comfortable with your new joint and have less surgical pain and swelling.

ANTI-EMBOLIC EXERCISES

Anti-embolic exercises, including ankle pumps, quad sets and gluteal sets are necessary to insure proper muscle tone and blood circulation to protect against blood clots. Perform these exercises 10 times every hour that you are awake. Start them as soon as possible after surgery.

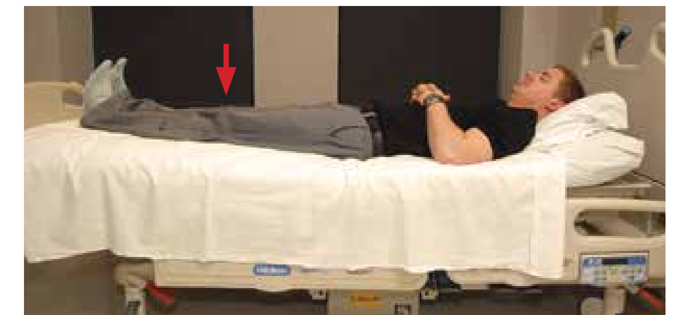
Ankle pumps

These can be done with your leg elevated, leg straight while in bed, or sitting in a chair. Move your foot up and down or make circles with your ankle without turning your leg, make circles to the right and to the left.



Quad Sets

Lie on your back with your legs straight. Tighten your thigh muscle by pushing your knee down into the bed. Hold for a count of five, then relax. Don't hold your breath.



Gluteal Set

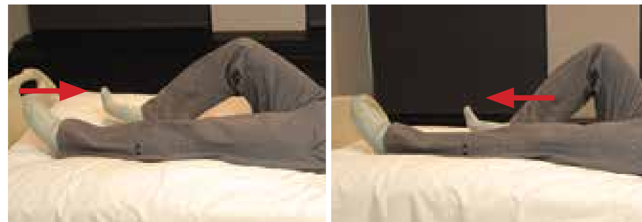
Lie on your back. Squeeze your buttocks together. Count to five, and then relax.

STRENGTHENING EXERCISES

Please practice these exercises prior to surgery as tolerated. After surgery, to regain control of moving your leg, you will be instructed to perform these exercises 10-15 repetitions 2-3 times a day.

Heel Slides

Lie on your back with your legs straight. Begin to bend one knee and slide your heel toward your body. Slowly slide your foot down, returning to starting position.



Seated Knee Extension

Sit at the edge of the chair or bed. Straighten your knee as far as possible. Hold for a count of three, then slowly lower to starting position. Perform 1 set of 15 repetitions, twice daily.

Seated Knee Flexion

Sit in chair with a towel under your foot. Pull your involved foot back to increase bend of knee. Hold for a count of 5. Slowly slide your foot forward to starting position. Perform 1 set of 15 repetitions, twice daily.

Short Arc Quad

Lying on your back or sitting propped up, place a fairly firm support six to eight inches high under your knees so they are slightly bent. Keeping your thigh and knee on the support, raise your lower leg (extending your knee fully). Hold your quad (thigh muscle) as tight as possible, pushing down into the support, for a count of five. Relax, lowering your foot completely. Repeat.

Straight Leg Raises

Lying on your back, with your operated leg straight and your unaffected knee bent, do a quad set. Lift the entire leg up off the bed about six inches. Do not take it higher than the other knee. Hold it as straight as possible for five seconds. Lower your leg gently and relax. Repeat as instructed.

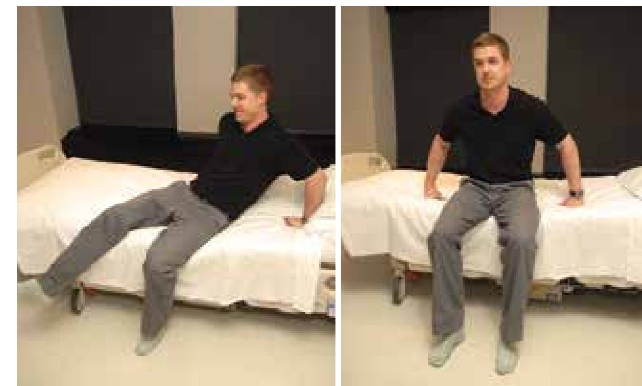
Getting Around After Knee Replacement Surgery

POSITIONING AND TURNING

While in bed, you may lie on your back or on either side; whatever is most comfortable for you. Do not place a pillow under your operated leg. If the pillow is positioned under your knee, the knee is bent slightly. If it is left bent for a prolonged period of time it will be difficult for you to achieve full extension or straightening of the knee later. When lying on your side, we recommend you place one or two pillows between your legs for comfort.

GETTING OUT OF BED

Prop yourself up onto your elbows and slowly bring your legs off the edge of the bed, one at a time. Once your legs are of the edge of the bed, push up onto your hands and scoot forward until you are sitting on the edge of the bed.



GETTING IN BED

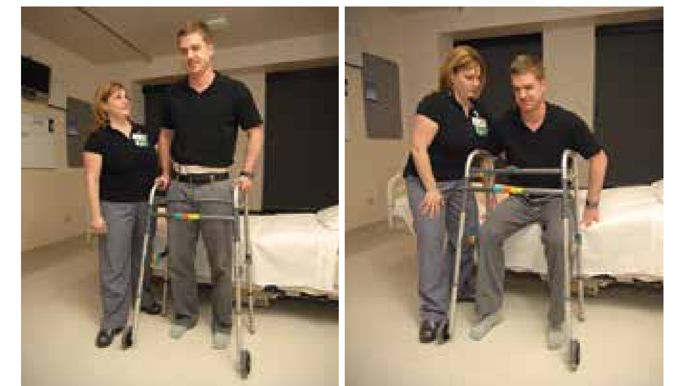
Sit on the edge of the bed. Slide back onto the bed and lift one leg up onto the bed and then the other with a leg lifter or the non-operated leg to assist if needed.

RISING TO A STANDING POSITION

Scoot toward the edge of the bed. Position the walker in front of you. Place both hands on the mattress or arm rests of the chair and push up using your hands. When able, move your hands, one at a time, to the walker.

SITTING DOWN WITH A WALKER

Back up until you feel the chair or bed on the back of your legs. Then, reach back with both hands for the mattress or arm rests and slowly lower yourself to a sitting position.



WALKING

While in the hospital, please ask for assistance from hospital staff to walk. You will need to use a walking aide following your surgery. When walking with your walking aide, remember to move the device forward first, followed by your operated leg, then your non-operated leg. Try to place one foot ahead of the other.

STAIRS

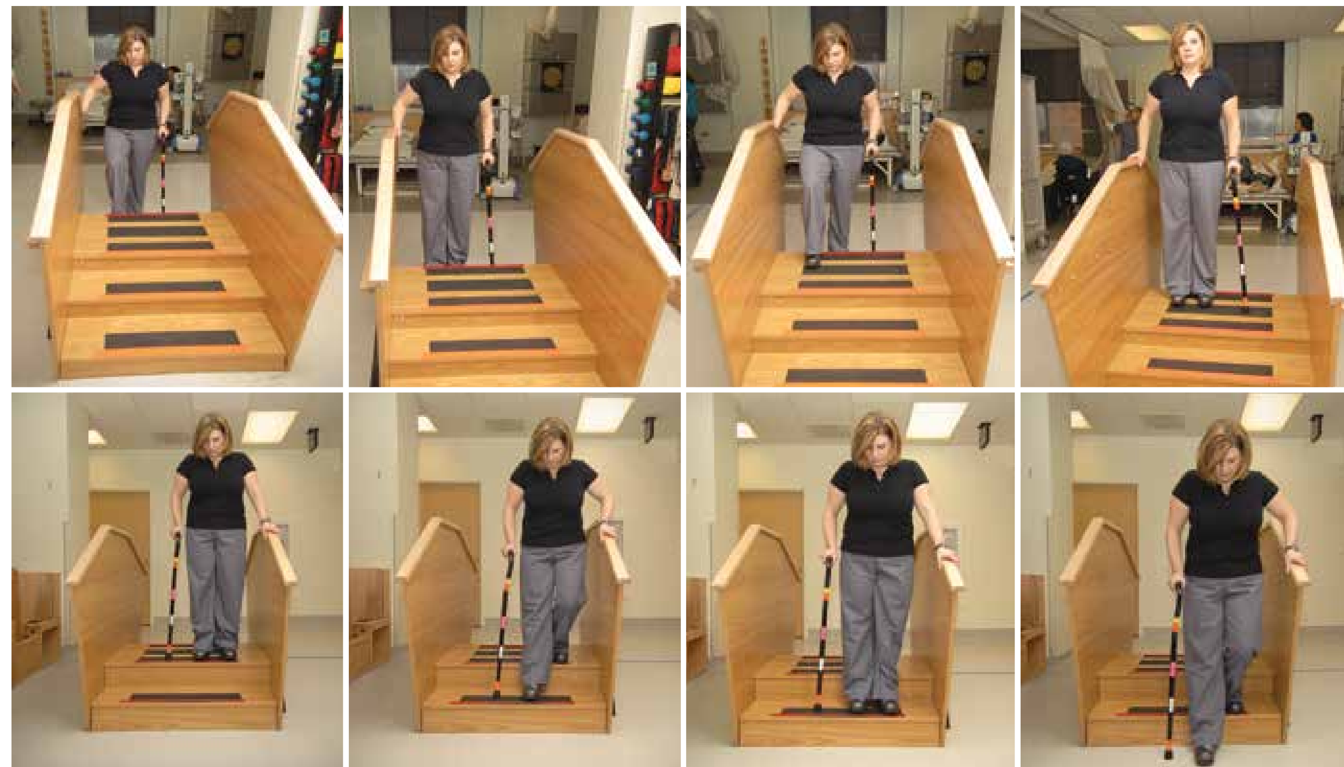
There are several ways to climb the stairs. The one you select will depend on the type of walking aide you use, and whether or not there is a handrail on the steps you will be climbing. Your therapist will teach you how to climb stairs prior to going home. In general, remember to lead with your non-operated leg going up, and lead with your operated leg going down. Remember, "up with the good, down with the bad".

OTHER CONCERNS

Many people perceive their operated leg as longer immediately after joint replacement surgery. This is called apparent leg length discrepancy. Usually this perception is due to advanced arthritis in your old joint or muscle imbalances. It usually disappears with muscle strengthening and stretching within 6 months. If this is a concern, please address it with your surgeon or physical therapist.

Option 1

Option 2



Activities of Daily Living

It is important to maintain independence with activities of daily living. Below are examples and tips on how to safely compete these tasks at home.

USING THE TOILET

Sitting on the toilet is much the same as sitting down in a chair or on the side of the bed. To ease your transfer, it may be helpful to use a raised toilet seat with grab bars.

BATHING

Your surgeon may allow you to shower after surgery. If not, you may need to sponge bathe until cleared by your surgeon. Soaking baths are not permitted. If need be, a shower chair or bench may be obtained.

To transfer into a tub/shower or walk-in shower, turn towards your operated side. Place your hands on the wall if grab bars are not available to steady yourself. Side step into the tub or shower leading with your non-operated leg first, followed by your operated leg.

TRANSFERRING INTO AND OUT OF A CAR

Have the car parked 3-4 feet away from a curb. Back up to the car with your walker until you feel the car frame against the back of your legs. Using your hands for support on the back of the car seat or the dash board, lower yourself slowly onto the seat. Never use the car door to stabilize yourself. Back onto the seat in a semi-reclining position. Bring in one leg at a time. Reverse the steps for getting out of the car.

Discharge Instructions

A patient will need someone home with them for the first 48 hours to assist you with getting things, meal preparation, shopping, etc. Constant nursing care is rarely needed at home.

Before you go home, it is important that many of the things that have been discussed or mentioned are well understood. At discharge It is important for you to know:

- Physician office contact information.
- When and where your follow up appointments are.
- What medications to take, those from before your surgery, those since your surgery, and, if on Coumadin, when your next blood test will be.

The discharging nurse will review your discharge instructions and medication list at discharge. You will also receive a written copy of the instructions and medication list to take home. Instructions will include:

- How to care for your incision. If it has drainage, know how to take care of it and the supplies needed.
- What exercises to do and how much weight you should put on your leg.
- All the equipment you will need in relation to your leg, including walker and/or crutches, bedside commode, reacher, sock helper, long sponge, bath bench, and hospital bed. These can be ordered while at the hospital if not received pre-operatively.
- What to do if your leg swells. (Page 17)
- Things to report to us: fever, change in pain, new drainage from your wound or drain site or change in the character of the drainage you are having.

Incision Care After Knee Replacement Surgery

The incision will be closed with skin glue or staples. Skin glue is waterproof. Once told the dressing can be removed, a dressing is no longer needed and you may continue to shower. If the outer skin edges are held close together with staples, a waterproof dressing is necessary to shower. The staples are removed once the incision has healed, usually around ten to fourteen days after surgery. Do not soak in a tub or pool until all of the scab is off your incision, usually around four weeks after surgery.

Everybody heals at a different pace. This pace can be affected by some medications and some medical conditions. It is not unusual for there to be some drainage from your incision for 7-10 days. As long as the dressing is not saturated and it remains sealed, leave the dressing on. If the dressing becomes saturated, call the surgeon's office. It is also not uncommon to have bruising around your incision or throughout your leg. No creams or ointments should be applied on top of the incision until all of the scab has come off naturally.

Pain Relief At Home

You will be given prescriptions for pain medication when you leave the hospital. There are prescriptions that can be prescribed in to a pharmacy and those that require an escribed prescription. When you get down to just over one day's worth of medication, you may call the office for a refill. Please allow 24 hours for refills. Narcotic pain medicines are not filled by the on-call physician over the weekend. There are some medications, such as Percocet, that cannot be called in and require a written prescription that someone will need to pick up at the office for you. When you call the office for a refill, please give your name, the date and type of surgery you had, the name and dose of your medication, and the telephone number of your pharmacy.

As you get farther out from your surgery, your need for pain medicine will decrease. Narcotic pain medicine is very constipating and your stomach will be much more comfortable when you take less of it. Instead of taking two tablets at a time, you may find taking one is enough. If two is too much and one is not enough, look at the label of your bottle. The letters "APAP" indicate that your medicine has acetaminophen (Tylenol) in it. The number after these letters indicates how much acetaminophen it contains. For example, 5/325 means you have five milligrams (mgs.) of the narcotic pain medicine and 325 mgs. of acetaminophen. You may find that taking one prescription pain pill with one acetaminophen tablet helps more than one pain pill by itself.

It is important to take the medication as prescribed. Taking more tablets than directed at one time or at more frequent intervals causes some concern. If you become overly medicated, you could fall and injure your surgical site. In addition, taking too much acetaminophen can damage your liver.

The day after you finish your blood thinning medications, you may go back on your regular arthritis medications (also called anti-inflammatory medications). This helps reduce the amount of narcotic pain medication that you need. It also helps decrease the amount of soft tissue swelling and warmth, while you are working on stretching for your motion. If you were taking Celebrex before surgery or were given it at the hospital, you may continue it even with the blood thinner.

For Knee Replacement patients, you may need to take your pain medication for your physical therapy. Patients usually cut back to taking pain medication for therapy and for sleeping at night. Once you have reached your goal of 90 degrees of bend in your knee, you may start to cut back on the pain medication.

Ice is very helpful in pain control. Applying an ice pack for 20-30 minutes at a time can give significant pain relief. You need to put a towel between your skin and the ice pack. You may use the ice pack provided for you at the hospital or a large bag of peas or corn conforms nicely and can be reused several times. After 20-30 minutes your circulation goes back to normal and the therapeutic affect is lost. Putting ice on and off frequently is better than keeping it on continuously around the clock.

Conditions You May Encounter At Home

EXCESSIVE SWELLING OF YOUR LEG AND FOOT

Many people do develop some swelling in the first few weeks after surgery. If this occurs, throughout the day periodically elevate your leg with your foot higher than your heart to help control swelling. While in this position, do your ankle pumping exercise. Within 10-15 minutes you should notice an improvement in the swelling, with the skin feeling less tight and your leg less puffy. While you are in bed, the head of your bed may be raised slightly as long as your leg is raised to a higher level. Your leg should also be less swollen when you wake up in the morning.

In some cases, excessive swelling of the foot and lower leg can be due to deep vein thrombosis (DVT), also known as blood clots in the veins of the leg. If pain or tenderness in the calf muscle is associated with swelling, if the swelling seems excessive, if swelling does not respond to elevation or if your leg is as swollen in the morning as the night before, your surgeon's office should be notified immediately.

CHEST PAIN OR SHORTNESS OF BREATH

Chest pain or shortness of breath following joint replacement surgery may be signs of a pulmonary embolism. Do not ignore these symptoms. Seek medical attention right away. Call 911.

DRAINAGE FROM THE INCISION

Drainage from the incision, or increasing redness around the incision, could signify impending infection. Your surgeon's office should be notified, and in most instances you will need to come in and have your incision looked at. Your dressing change routine and medications may need to be adjusted. Please cover with dry sterile gauze twice a day or as needed. If you have drainage, do not shower.

Occasionally, a pocket of fluid (a hematoma if bloody fluid; a seroma if clear fluid) develops under the closed incision. This collection of fluid can result in a hardening of the skin over this area. As the surgical wound heals, the body re-absorbs this fluid in most cases and the area softens. Occasionally, this fluid finds an opening in the incision and drains out. Hematomas drain dark maroon colored fluid and seromas drain a clear yellowish fluid. If this drainage occurs, you should keep the area clean and call your surgeon's office.

HIGH FEVER

While it is common to run a slight fever following joint replacement surgery, a high fever could be a sign of impending infection. If you feel you have a fever, take your temperature and make note of it. At least three hours later, take your temperature again. If both readings indicate a fever of 101° or more, notify your surgeon's office. Your pain medication may have acetaminophen in it, which will help to keep your fever down. If you need to call the surgeon's office, please be prepared to provide information on recent medication you have taken and dosage.

INCREASED JOINT PAIN

Pain in your joint should be decreasing from day to day. If it seems to be steadily increasing, call your surgeon's office.

CONSTIPATION

Many patients experience constipation after surgery. Not having a bowel movement for 2-3 days following surgery can be normal. Constipation after surgery can be caused by pain medication, which contains narcotics. Also, decrease in liquid, food intake and activity contribute to constipation. While on pain medication, continue to take an over the counter stool softener. If you have had no bowel movement 2-3 days after surgery, you may need to take a laxative.
If the stool softeners and laxative do not relieve your discomfort, contact your pharmacist, family doctor or surgeon for advice. In addition to these medications, you should increase your activity, water and fiber in your diet. Remember to review you Discharge Instructions for suggestions, if you are having difficulties with relieving your bowels.

Potential Complications of Knee Replacement Surgery

Joint replacement surgery has a very high success rate. Complications are relatively uncommon considering the complexity of the procedure.

However, with any surgery there are the risks of anesthesia, of bleeding too much and of infection occurring. With joint replacements, the most common complication is blockage or blood clots in the legs, the most serious complication is infection, and the most serious long-term complication is loosening of the prosthesis.

Anesthetic Complications

Anesthetic complications can occur. When your anesthesiologist sees you before surgery, the risks involved with the type of anesthesia you will have can be discussed and any concerns addressed.

Bleeding Complications

Bleeding complications are usually due to the fact that small blood vessels are cut or a larger blood vessel is injured during the course of the operation. All care and precautions are taken to avoid blood loss or injury to surrounding tissues. The small blood vessels are cauterized to control bleeding. Injuries to larger vessels are repaired. Your blood pressure and the amount of blood loss are monitored continuously. Your blood count is checked prior to surgery as well as after for a few days. Bleeding into the wound is drained and monitored.

Infection

Any time our skin is cut, bacteria can enter our bodies and is fought off by our immune system. Despite routine surgical procedures, infection from surgery of any type is always a risk. Special precautions are taken to avoid introducing an infection at the time of joint replacement surgery, including a special ventilation system used in the operating room, and antibiotics administered before and for 24 hours after the operation.

Some individuals are more prone to develop infections, such as people with an immune system impaired by certain medical conditions, people that need to take certain medications that delay wound healing, people who have an infection in the affected joint or anywhere else in the body at the time of surgery. Infections of the bladder, prostate, kidneys, gums and skin ulcers should be cleared up by appropriate treatment well before the day of surgery.

The artificial joint can become infected many years after the operation. Bacteria can enter and travel through the blood stream from a source elsewhere in the body, such as from an infected wound, through our mouths during dental procedures, or a gallbladder infection.

Blood Clots

Blood clots in the veins (deep venous thrombosis) of the legs are the most common complication of knee replacement surgery. Swelling from the surgery and decreased activity lead to slowed circulation in the affected leg. The speed at which our blood clots varies from individual to individual. If clots develop and remain in the legs, they are a relatively minor problem. Occasionally, they dislodge and travel through the heart to the lungs (pulmonary embolism). This is a potentially serious problem, since (very rarely) death can result from embolism. Ankle exercises, early mobility, use of blood thinners, and attention to swelling are all aimed at avoiding and preventing blood clots from forming or progressing.

Blood clots can occur despite all these precautions. They are usually not dangerous if appropriately treated, but may delay your recovery, your discharge from the hospital, or be a cause for readmission once you have gone home.

Loosening of the Prosthesis

Loosening of the prosthesis from the bone is the most serious long-term problem. How long the bond will last depends on a number of factors. Ongoing research and technological developments continuously work at advancing what is known about the fixation of the components and how best to accomplish it. Some of the factors are influenced by what the patients do. We know that excessive force on the implant can cause the bond to loosen. The other important factor you control is your weight. For every pound you gain, it adds three pounds of force across the knee with each step you take.

Fracture of Bones

Fracture of one of the bones rarely occurs during joint replacement. If it occurs, it is more common during revision knee surgery. One of the bones can fracture later from any trauma, such as falling down stairs.

Pressure Sores

Pressure sores on the tailbone and heels may develop if you stay in one position too long. Normally we move frequently in our sleep and all during the day. This changes the amount of pressure over our bony parts. With the reluctance to move because of the medication or for recuperation in general, this ability to change position frequency on your own is diminished. Pressure sores can be avoided by changing your position every two hours. With orthopedic surgery, this also helps with your pain control. A position that feels really good when you first get there will soon be uncomfortable because your body wants to move. When you need help to change your position, call the nurses to help you until you have learned how to do it on your own.

Residual Pain and Stiffness

Residual pain and stiffness can occur. This is pain that lasts beyond your recovery. The completeness of the pain relief and the degree of mobility reached is partially determined by your knee problem before surgery. Generally with total joint surgery people get back the motion they had before surgery. Rarely, patients have pain after surgery that cannot be explained.

In virtually all cases the surgery will make a significant improvement in your pain and mobility. While there is always a risk of complication, every effort is made to prevent them. Should you develop a complication, we will give every effort to ensure a good result. In most cases, you will have a pain-free joint, and it will feel "normal." This transition to normalcy can take up to nine to twelve months.

Limits to Range of Motion

The primary reason most people have total knee replacement surgery is pain relief. Regaining the ability to do things and increased motion are added benefits when they occur. A knee that is ultimately stiffer is an undesired result. Some individuals regain their motion with little difficulty, while others are stiff and sore and must work hard to reach the goal of 90° of bending by six weeks. In day to day functioning we need a bit more than 90° to do stairs, get up out of chairs, and get in and out of cars easily. While you are still anesthetized and with the new knee in place, your surgeon checks the amount of motion at your knee, aiming at getting it out straight and with a bit more than a 90° bend.

If after all of your hard work, you have not reached the goal of 90°, your surgeon may feel you would benefit from a manipulation. For this you come back to the hospital, and under anesthesia, he bends your knee for you. Following this, usually you go home and have outpatient physical therapy the next day. You may be put into a continuous passive motion (CPM) machine that gently moves your leg back and forth. When you go home, you continue with therapy and the use of the CPM machine until you reach and maintain 90° of bending.

Routine Progression of Activity

You are not expected to stay in bed when you return home from the hospital. You should be up and about on your walker or crutches most of the time, but rest as much as needed. You should also do the exercises you have been taught and that you can do on your own.

It is not uncommon to have difficulty sleeping for the first one to two months after surgery. It is acceptable to rest during the day, but try to avoid taking long naps if you have trouble sleeping at night.

When the scab is completely off your incision, you may find participating in a local water exercise programs provides a good workout without stressing your joints. The Ohio River Valley Chapter of the Arthritis Foundation sponsors many of these programs. Call **513-271-4545** for a location listing.

DRIVING

Driving is individualized. If your joint replacement was in your right leg, you may need a longer period of time before you can drive. You should be able to bend your knee enough to get in and out of the driver's seat and no longer using narcotic pain medication during the day before returning to driving. You should check with your surgeon for recommendations when you may return to driving.

SEXUAL RELATIONS

You are not alone with your concerns and questions about resuming sexual activity. In general, it is safe to return to sexual activity by six weeks after surgery. If you choose to abstain, remember that sexual activity can include more than intercourse. It is important to communicate with your partner to minimize the impact of your surgery on intimacy. If you have any concerns, please check with your surgeon's office, therapist or nurse.

RETURNING TO WORK

You will probably not return to work for eight to 12 weeks after your surgery. Quite a few patients do return earlier, depending on the nature of their work and how flexible their workplace is for returning on a part-time basis initially. We generally tell employers eight to 12 weeks, but you may return sooner if you are physically ready. Discuss an early return to work with your surgeon. Please contact your surgeon's office if you need paperwork completed for your employer.

FOLLOW UP CARE

In the first few months after your surgery, you will have routine visits to monitor your healing and progress. Any questions, concerns, or worries can be addressed at these visits. Prior to your visit, it may be helpful to write down things you would like to discuss during the visits. Remember to note if you need a prescription refill.

It is important to talk to you physician about your follow-up plan. Below is an example of a typical schedule following hip or knee replacement:

10 to 14 days after surgery: Wound staples are removed at this visit if you have them. You may want to take pain medication before you leave home and bring a dose with you. If you have a home health nurse who will be taking out your staples, you will not need to schedule this visit.

Four to six weeks after surgery: X-rays are taken to check your healing. One view is with your leg to the side. The technician will help position it with you.

Three to six months after surgery: This appointment may or may not be required by your surgeon to monitor your progress. No X-ray is required.

One year after surgery: You will have an X-ray taken at this visit. After the one year appointment, you should follow-up as directed by your surgeon. Problems around the surface between the components and the bone show up on X-ray before you have symptoms. Waiting until symptoms occur may lead to a more difficult treatment.

INFORMING OTHER HEALTH CARE PROVIDERS

It is important that you inform all of your health care providers that you have had joint replacement surgery. For all total joint patients, it is advised to protect the joint whenever a procedure that causes bleeding is performed. Please check with your surgeon regarding the length of time. People who have conditions that challenge their immune system are considered at risk for infections and are advised to take the antibiotic for the rest of their lives. These conditions include rheumatoid arthritis, systemic lupus, insulin dependent diabetics, cancer patients on chemotherapy or radiation therapy, hemophiliacs, and anyone who has had a previous joint infection. Should you need another procedure, emergent or elective, you should have antibiotics for routine dental cleaning and any other dental procedure. Your dentist may order them for you or you may call our office.

Antibiotics should be taken one hour prior to any dental work, including routine teeth cleaning. This does not include your daily teeth brushing. Urologic (bladder) procedures for patients identified as at risk for infection do need antibiotic coverage. Please ask the physician performing the procedure for the antibiotic.

You will be given an identification card stating your surgery and date. The security systems at the airports and government buildings will likely pick up the metal and set off the alarm. Although the cards are no longer accepted at airports, it can be used as verification whenever needed.

Frequently Asked Questions

AFTER SURGERY

I feel confused, dizzy, or very sleepy now. What can I do?

We try to give you medications to control your pain so that you are comfortable in the hospital and once you go home. For some people, the medication dosage may be too strong, particularly once you get home and as your pain lessens. If you feel more confused or sleepy, particularly after taking your pain medication, please call your surgeon's office. Your medication or dosage may need to be changed or adjust.

I can't sleep at night, my leg is uncomfortable. What can I do?

It is natural for our bodies to change position while we sleep. Your ability to do this on your own may be limited and you may need someone 'on-call' to help reposition your leg until you are able to do it yourself. Knee patients frequently report that if their knee is twisted as they turn in bed it is very painful. Tips to increase comfort include:

- Turning the leg all together, like the way you roll a log on the ground, decreases the twisting effect.
- Using pillows to support the leg may be helpful.
- Ice is very helpful in pain control and decreasing pain that has increased due to a change in position. We recommend a bag of frozen vegetables (family size peas or corn) for 15-20 minutes. Place a towel between the ice pack and your skin.

I'm having muscle spasms in my thigh, especially at night. The pain medicine doesn't really help. What can I do?

People who have maintained a pretty high level of activity prior to surgery sometimes have 'irritable' muscles in the early post-operative period to due to a decrease in activity and more time spent lying down. While you may be doing some exercises, getting up out of bed and starting to walk, this may still be significantly less moving and walking than your muscles are used to doing. If you find your leg muscles are tightening up on their own or your leg is jerking in your sleep, there is medication we can give you to relax your muscles.

I haven't had a bowel movement since surgery and it's been five days now. Should I be worried?

Several changes have occurred that can disrupt your regular schedule. The post-operative pain medicine slows your stomach down tremendously. It is important to counteract this by drinking lots of fluids, eating foods that do not sit heavy on your stomach, taking a stool softener and if needed a laxative.

Before you worry about it, ask yourself how your stomach feels and if you have been eating a normal amount of food since your surgery. Chances are your appetite has not returned to normal yet and you have been eating considerably less than usual. The pain medicine can also decrease your appetite. Take the pain medicine when you need it, rather than every four to six hours around the clock in case you should need it.

They gave me a pair of compression stockings the day I left the hospital. Do I have to keep wearing them?

Compression stockings are ordered for you while you are in the hospital. Please be sure to take them home with you. You wear them during the day only as long as you are having swelling. Take them off at night and put back on in the morning before you have been out of bed long enough that your legs are starting to swell. They need to be put on so that the fabric is smooth, top to bottom. If they get bunched up they are like rubber bands around your leg and can block your circulation. Rolling down the tops is the same as being bunched up. If the stocking is a bit long, it is better to pull it down at the toes and have extra fabric there then to let the top part roll down.

My leg is swollen and it hurts. The pain medicine doesn't help. What should I do?

Swelling that comes with decreased walking should go down with elevation. If it does not and if it is the same amount of swelling, or more, in the morning as it was when you went to bed, call the office. They will schedule you for what is called a Doppler. It is a non-invasive study to give us information about how the blood is flowing through your leg. If a blockage has developed, then it needs to be managed a bit differently. This is a problem we watch for and even gave you blood thinning medication to avoid. Still in a certain percentage of people they still develop what we call deep venous thrombosis (DVT). This is a medical problem so, even though we do the test to find out if it is there, we will ask your medical doctor to manage it if the result is a positive one. A negative result means you do not have a DVT and you still need to elevate your leg periodically so that your foot is higher than your heart.

I am finished with therapy. How long do I need to keep doing my home exercise program?

A routine of regular exercise is an important part of good health maintenance. You want to progress to a program of regular walking, water exercise or your regular activity routine if you were pretty vigorous before your surgery. You have been doing two types of exercise; those exercises that put your joint through its range of motion and those that strengthen your muscles. Continuing to do your range of motion exercises will help to relieve stiffness that comes with sitting or periods of inactivity.

Strengthening exercises are the ones you do with weights or rubber bands to make your muscle work harder. You want to build up your strength so that you can walk without limping. Generally this means you have built yourself up to doing three to five sets of ten repetitions with five to seven pounds of resistance with your strengthening exercises. If you have access to exercise facilities or water exercise classes then you can progress to doing your exercises there once you reach this level.

My knee clicks. Is it falling apart?

The clicking is coming from the metal and plastic surfaces tapping against each other. Our knees naturally have a little play in them to allow us to bend them. Your new knee has a plastic button on the back of your kneecap. As you straighten your knee when rising out of a chair, going up stairs, or walking, the knee cap is pulled up against the end of the thigh bone (femur) which now has a metal surface on it. Once you have regained your thigh muscle strength, there is much less clicking or by then you have gotten used to it. Patients have also reported that they are aware of this clicking if they walk in their yards or on other uneven surfaces. Then it is the plastic tray on the shinbone and the metal piece on the thighbone that are tapping. Unlike the noises experienced in your knee prior to surgery, these noises are not associated with pain. Since you feel the vibration in your body of the tapping, you hear the noise more than the rest of us.

My knee is numb on the outside. It wasn't like that before. What happened?

When the skin incision was made down the front of your knee, the small nerves in your skin were cut. These small nerves were the ones that gave you sensation in your skin. The nerves to the tissue under your skin are still intact so there is no change to the bigger nerves in your leg. It could take nine to12 months for this numbness to subside.

Contact Us

For more information or questions about your joint replacement surgery, please do not hesitate to contact our Orthopaedic Nurse Navigator at **513-557-4882** or by Email at **JointCare@thechristhospital.com.**

The Christ Hospital Health Network
2139 Auburn Avenue | Cincinnati, OH 45219
513-557-4882
email: JointCare@thechristhospital.com

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