PATIENT GUIDE

TO

ARTHROSCOPIC KNEE SURGERY

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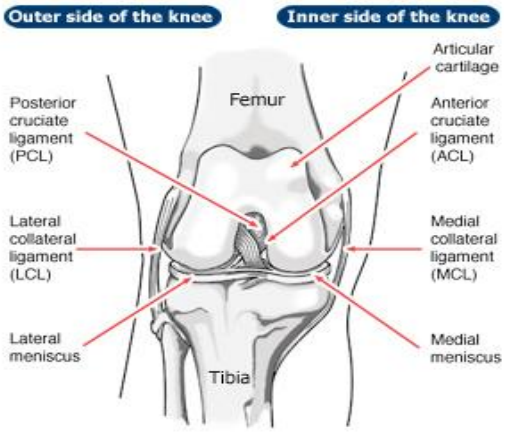
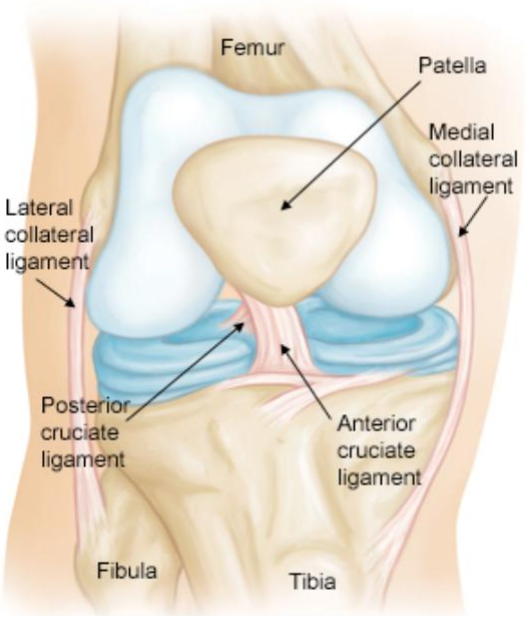
ARTHROSCOPIC KNEE SURGERY

The knee is one of the most commonly injured joints in the body. It consists of 3 bones, the femur, tibia and fibula. The ends of the bone are covered with "articular" cartilage. There are also two fibrocartilage "cushions" in between the bones, called the medial and lateral meniscus. Four ligaments stabilize the knee - the anterior cruciate (ACL), posterior cruciate (PCL), medial collateral (MCL) and lateral collateral (LCL).





Common Knee Problems

Meniscal tears

These are commonly referred to as "torn cartilage." They can be due to injury during sports occurring during a squatting or twisting maneuver. However, they can also be due to a degenerative "wear and tear" process. As people age, the cartilage becomes thinner and weakens over time making it more prone to a tear even with minimal or no specific trauma. Common symptoms of a meniscus tear are pain, stiffness, swelling, catching or locking of the knee, and the sensation of "giving way." If a tear is small and symptoms resolve then non-surgical treatment may be indicated. A larger tear will not heal itself. Arthroscopic surgery to repair or partially remove the torn meniscus is typically indicated in these cases.

Ligament tears

Most ligament tears result from a twisting, pivoting or landing injury associated with sports such as basketball, soccer, football and skiing. The MCL is the most frequently sprained (torn) ligament of the knee. Most MCL tears can be treated non-operatively. An ACL tear occurs as a result of a noncontact injury in 70% of cases. 50% of acute ACL tears are associated with other injuries to the knee such as meniscus, articular cartilage or other ligament tears. The ACL does not heal without surgical treatment. Non-surgical treatment may be considered based on a patient's age (very young or elderly), activity level or with

a partial tear. Surgery is typically performed in patients who want to return to a full level of activity including sports and manual labor.

Arthritis

In its early stages, arthritis is typically non-surgically with medications, activity modification, braces, weight loss, exercise and injections into the knee (cortisone or hyaluronates i.e. Orthovisc, Synvisc, Supartz, etc.). Arthroscopy can be helpful in treating mechanical knee pain associated with a torn meniscus or loose bodies. This is particularly in younger patients or in cases where there is a desire to delay knee replacement surgery.

Loose Bodies

These are typically associated with arthritis. However, they may also result from an acute trauma to the knee i.e. patella dislocation or as a result of condition called osteochondritis dissecans. Once the fragment is loose in the knee joint it will cause mechanical symptoms resulting in pain, swelling, catching and giving way. Arthroscopic surgery can facilitate the repair or removal of a loose body.

Patella Disorders

Since the patella tracks in a shallow groove in the femur, called the trochlea, it is prone to instability or dislocation. The first line treatment for these conditions are usually non-operative. However, arthroscopy is sometimes indicated to improve the tracking of the knee cap (i.e. lateral release, or tightening of the patella stabilizing ligaments) or to treat chondromalacia (softening of the articular cartilage) that may occur as a result of this problem.

Cartilage Disorders

Localized areas of cartilage loss in the knee may be amenable to treatment with a variety of different surgical treatments such as osteochondral autograft and autologous chondrocyte grafting. These procedures are facilitated with arthroscopic surgery.

SCHEDULING AND PREPARING FOR SURGERY
Count Down Checklist

Once you have decided to proceed with surgery, there are a number of things that need to be taken care of before the day of the operation. Following is a checklist. For more specific information, please see the pages following.

- ❑ Select the date for the surgery.
- ❑ Stop smoking before your surgery.
- ❑ Have the necessary lab work done. Any difficulty in keeping your PAT appointments, please call the hospital, 585-2418.
- ❑ Have your history and physical done within 30 days of surgery.
- ❑ Have a preoperative office visit (optional) to ask questions and see a joint model.
- ❑ Report important observations or changes. If you have any changes in your physical condition, such as fever, sore throat, abscess, ulcers, nausea, vomiting, or diarrhea, and you question your readiness for surgery, consult your primary care physician to assess and treat the problem.
- ❑ Stop taking certain medications in the days before surgery. Medications may be taken as instructed by the hospital assessment nurse. If you are on medication for high blood pressure, your heart, or asthma and have not been instructed what to take, please call The Christ Hospital assessment nurses at 585-1720.
- ❑ 1 week before surgery stop blood thinner medications including Plavix, Vitamin E and Fish Oil. Obtain instructions for stopping Coumadin (warfarin).
- ❑ 5 days before surgery stop taking aspirin or aspirin containing medications and any non-steroidal anti-inflammatory medications (excluding Celebrex).
- ❑ Do not drink any alcohol for 48 hours before surgery; it delays emptying of the stomach.
- ❑ The general rule is DO NOT EAT OR DRINK ANYTHING after midnight the night before surgery. As soon as you are awake and your stomach is not upset, you will return to your regular diet.
- ❑ The morning of surgery: You may shower, bathe, and shampoo before coming to the hospital. Remove any fingernail or toenail polish. Wear comfortable lose fitting clothes. Leave valuables, including jewelry, at home.

If you have any questions, please fell free to contact us at the following number:

Office: (513) 791-5200

Scheduling and Preparing for Surgery

Selecting a Date for Surgery

Your primary care physician (PCP) can help you weigh the risks and benefits of surgery in light of your general health. If you have a condition that is being treated by a medical doctor other than your PCP, you may want to discuss your surgery with this physician. You can choose a date with our office and we will schedule it at the hospital. We will also verify your procedure with your insurance company, and provide the hospital form for your pre-anesthetic physical examinations.

Necessary Pre-Operative Testing

About a week to ten days before your operation, common medical tests will be ordered and performed at the hospital where you will have your surgery. The hospital nurses will call to schedule these. The results give your surgeon, primary care physician and the anesthesiologist information they need to plan and manage your operation. We call these tests Pre-Admission Tests (PAT). The basic tests include an EKG of your heart if you are over 50 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 surgery.

Within 30 days of surgery you will need a physical examination. 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. If you have any infection, (including bladder, prostate, kidney, gums, skin ulcers, or ingrown toenails) it should be treated and cleared up before undergoing surgery.

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

Surgery and Your Current Medications

Traditional NSAIDS (non steroidal anti-inflammatory medications) should be stopped 5 days prior to surgery. The newer Cox-II NSAIDS (i.e. Celebrex) do not need to be stopped.

If you take aspirin or aspirin containing drugs such as Percodan, Excedrin or Anacin, these should also be stopped 5 days before surgery.

Vitamin E and Fish Oil Supplements need to be stopped 7 days prior to surgery.

Coumadin needs to be stopped at least 5 days prior to surgery and Plavix needs to be stopped 7-10 days before surgery. Please discuss this with your cardiologist or primary care physician first.

Pain medications without aspirin, like Tylenol, Darvocet, Vicodin and Percocet can be taken by mouth up to the night prior to surgery.

If you take medicines prescribed for high blood pressure, breathing, heart condition, seizures, or cortisone preparations, the hospital pre-surgical nurse or one of your physicians will instruct you on what to take the morning of surgery. Those who use insulin or an oral agent for diabetes also need special instructions.

Some Commonly Used Pain Medications

Pain Medicine	Generic or Other Names	Comments
Tylenol	Acetaminophen, APAP Phenaphen	*
Anacin, Bayer, Bufferin, Easprin, Ecotrin, Excedrin, Zoprin	Aspirin compounds	ASA, **
Codeine	Codeine	A, Rx, ***
Darvon	Propoxyphene	H, Rx, ***
Darvocet	Propoxyphene & APAP	H, Rx, ***
Emprin (with) Codeine	Aspirin and Codeine	A, Rx, ASA, ***
Fioricet	Butalbital with Tylenol	H, Rx, ***
Fiorinal	Butalbital with Aspirin	H, Rx, ASA, ***
Percodan	Oxycodone, Oxycodan	A, Rx, ASA, ****
Percocet, Roxicet	Oxycodone with Tylenol	A, Rx, ****
Talacen	Pentazocine + Aspirin	H, Rx, ASA, ***
Ultram	Tramadol	A, Rx, ***
Vicodin, Lortab	Hydrocodone with APAP	H, Rx, ***

Legend to Comments

ASA: contains aspirin
APAP: acetaminophen

A: addictive
Rx: needs prescription

* degree of pain relief
H: habit forming

Examples of Prescription and Over the Counter NSAIDs

Generic Name	**Some Brand Names**
Aspirin compounds (acetylsalicylate)	Anacin, Ascripton AD, Bayer BC Powder, Bufferin, Excedrin, Ecotrin, Zorprin
Non-aspirin salicylates	Arthropan, Disalcid, Magan, Trilisate
Diclofenac	Voltaren*
Fenoprofen	Nalfon*
Flurbiprofen	Ansaid*
Ibuprofen	Advil, Medipren, Motrin*, Nuprin, Rufen
Indomethacin	Indocin*
Ketoprofen	Orudis*
Meclofenamate	Meclomen*
Mefenamic acid	Ponstel
Naproxen	Naprosyn, Aleve*
Naproxen sodium	Anaprox*
Phenylbutazone	Butazolidin*
Prioxicam	Feldene*
Sulindac	Clinoril*
Tolmetin	Tolectin*

*Can affect liver or kidneys. Need to have blood tests periodically (CBC, Liver Function tests, serum creatinine) by your primary care physician.

Cox II Non-steroidal, **Celebrex, <u>does not need</u>** to be stopped prior to surgery.

Smokers Should Know

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 before your surgery. Smoking is not allowed anywhere in the hospital.

Important Observations to Report Prior to Surgery

If your physical condition changes before surgery (for example, you develop a cold, persistent cough or fever) or if there is an important change to the skin where the surgery is to be performed, notify our office as soon as possible. An important change would be an open draining wound or localized area with swelling, redness, heat, tenderness or pain to pressure

What to Bring to the Hospital

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

- ❑ Medical insurance card(s) (Medicare and/or other) and Prescription card.
- ❑ A list of your medication(s) including the name of each medication, its dosage and how many milligrams (mgs) and how often you take each one. Do not bring your own medications, unless instructed to do so by anesthesia. Doing so causes confusion. Nurses prefer to dispense all medication so that they know what you are getting.

POTENTIAL COMPLICATIONS

The incidence of infection after arthroscopic knee surgery is less than 1%.

Rare risks include bleeding from acute injury to the popliteal artery (overall incidence is 0.01 percent) and weakness or paralysis of the leg or foot. It is not uncommon to have numbness around the arthroscopic incisions, which may be temporary or permanent, but usually improves in 9-12 months after surgery.

A blood clot in the veins of the calf or thigh is a potentially life-threatening complication. A blood clot may break off in the bloodstream and travel to the lungs, causing pulmonary embolism or to the brain, causing stroke. This risk of deep vein thrombosis (DVT) is reported to be less than 1%.

Recurrent instability due to rupture or stretching of the reconstructed ligament has a reported incidence of 2.5% to 10%.

Knee stiffness or loss of motion occurs most commonly after ACL surgery but, in most cases, can be worked out with physical therapy. Occasionally, further surgery is necessary to improve the range of motion of the knee.

Further surgery may be required If any of these complications are encountered. Fortunately, surgical complications associated knee arthroscopy are uncommon. While there is always the risk of a complication, every effort is made to prevent them. Should you develop a complication; every effort will be made to ensure a good result.

WHAT TO EXPECT AT THE HOSPITAL

Knee arthroscopy is done on an outpatient basis. After you register, you are taken to where you prepare for your surgery. The anesthesiologist will see you there and discuss anesthetic options and risks. He/She will discuss advantages of general and regional anesthesia. If you want more information on different types of anesthesia, please ask for it. You and the anesthesiologist make the final choice of anesthetic.

Although a general anesthetic is used, the anesthesiologist may also administer a nerve block around your thigh/knee usually lasting from 8 to 20 hours. This helps decrease pain after surgery. See more information on femoral and sciatic nerve blocks under section below.

Before going to the operating room, you will be given sedatives. You will be taken to the operating room about an hour before the operation for anesthesia and necessary procedures.

During surgery, a small camera, also known as an arthroscope, is inserted in the knee through a ¼ inch incision. The camera is attached to large video monitors enabling visualization of the inside of the entire knee. Several additional small (¼ inch to ½ inch) incisions are used to pass specialized instruments into the knee. Occasionally, an additional open incision will need to be made around the knee to treat ligament tears, meniscal tears or to facilitate the removal of a loose body.

After surgery is completed, you will be placed in your bed, which has been prepared and brought to the operating room for you. Then you will be taken to the post-anesthesia recovery room until you wake up. Total time spent in the operating and recovery room will depend on the type of surgery you have.

When the operation is over, your surgeon will meet with relatives or friends in a consultation room at the surgical waiting area to give them a progress report.

Anesthesia and Post-Operative Pain Management

For your surgery anesthesia is given by an anesthesiologist from The Christ Hospital. Most patients meet with the anesthesiologist at the hospital on the day of their surgery. Prior to this time your history and physical exam, blood work, EKG and chest x-rays have been reviewed. Questions and concerns about your anesthesia or previous anesthesia experiences can be discussed with your anesthesiologist. They will continue to monitor and adjust pain modalities as needed while in the hospital after surgery. An anesthesiologist is available 24 hours/day if problems should arise.

Femoral/Sciatic Nerve Block Information

Your surgeon may request this nerve block for post-operative pain relief in surgical procedures involving the knee. The femoral nerve block controls the pain on the front of the knee. A sciatic nerve block controls pain behind the knee.

Benefits: Significant to total pain relief following extensive surgeries involving the knee. Additional benefits include: decreased pain medication requirements, reduced incidence of nausea and vomiting, lighter general anesthetic and potentially early discharge home.

Normal course and expected side effects: A numb and weak leg is expected for approximately 12-20 hours after the surgery, but can last up to 24 hours in some cases. The duration of the numbness can vary and is dependent on the type of local anesthetic used, additives and individual variation. In certain cases, the anesthesiologist will leave a catheter in place to allow for a continuous dose of local anesthetic to be administered for up to 2-3 days after surgery.

Once the numbness starts to wear off, the discomfort from surgery will intensify progressively over the next 1-2 hours. Therefore we recommend starting oral narcotics (e.g. Vicodin or Percocet) and anti-inflammatory medications (e.g. Ibuprofen or Motrin) as soon as oral medications are tolerated. These medications should be taken on a scheduled basis, allowing for a smooth transition from the nerve block to oral medication based pain relief.

Risks: Failed block, bleeding, infection, reaction to local anesthetic including seizure and cardiac arrest, peripheral nerve injury or persistent tingling sensation are all potential risks. Fortunately, these serious side effects and complications are uncommon and are lessened by placement of the block with the use of a nerve stimulator and sometimes ultrasound guidance. Please discuss any concerns regarding these risks with your anesthesiologist.

Additional recommendations: Please keep the operative knee and leg well protected and padded for the duration of numbness. This will prevent unrecognized pressure from being placed on the knee/leg that could result in nerve injury

An anesthesiologist will attend to any pain-related problems you might have on an as-needed basis. Due to the extra time and personnel that postoperative pain management requires, there is an additional charge for these services. If you are concerned with insurance coverage, please contact your insurance company prior to surgery. Feel free to call and discuss any concerns that you might have regarding post-operative pain relief. The phone number for medical questions is 585-2482, 8 a.m. to 4 p.m., Monday through Friday.

WHAT TO EXPECT AFTER SURGERY

When you wake up from anesthesia you will have a soft bulky bandage on the knee. If you received a nerve block prior to surgery your knee/leg will be numb and heavy. When fully awake you will be able to return home.

A prescription for pain medicine will be given to you. You will want to start taking this before the nerve block wears off so you aren't playing "catch up" trying to control the pain. An ice bag or a "Cryo-Cuff" is applied to the knee to help reduce pain and swelling as well.

Pain Relief Once Home

Pain medications come in two categories, those that can be called in and those that require a prescription. Your prescription on discharge from the hospital may have been the type of pain medication that requires a written prescription to be taken to the pharmacy.

When you get down to just over one day's worth of medication you may call for a refill. Please allow 24 hours for refills. If you do not have enough medication to last the weekend, you may call by noon on Friday to assure a refill before the day is over. 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 during normal business hours.

It is very helpful when you call the office for medication renewal that you give your name, the date, your type of surgery, the name of your medication, how much you take of it at one time and how often you take it. We need the telephone number for your pharmacy, given slowly so we can get it properly the first time through.

As you get farther out from your surgery, your need for pain medicine will decrease. 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 is in there. For example, 5/500 means you have 5 milligrams (mgs.) of the narcotic pain medicine and 500mgs of acetaminophen. You may find that taking one prescription pain pill with one acetaminophen tablet helps more than one pain pill by itself. Narcotic pain medicine is very constipating and your stomach will be much more comfortable when you take less of it.

It is important to take the medication as prescribed. Taking more tablets then directed at one time or at more frequent intervals causes some concern. The concern would be that you could be overly medicated, have a fall and injure your surgery as well as get too much acetaminophen. When you have pain pills with 500 mgs acetaminophen, you can take 2 tablets up to 4 times a day. If the content is 325 mgs., you can take up to 12 tablets in 24 hours. Too much acetaminophen can affect your liver.

For arthroscopic ligament surgery (i.e. ACL reconstruction) it is important to take your pain medication for your physical therapy. Patients usually cut back to taking pain medication for therapy and for sleep at night.

Ice is very helpful in pain control. Applying an ice pack for 20-30 minutes at a time can give significant pain relief. You want to put a towel between your skin and the ice pack.

A large bag of peas or corn conforms nicely and can be used and reused several times. After 20-30 minutes your circulation goes back to normal and the therapeutic effect is lost. Putting ice on and off frequently is better than keeping it on continuously around the clock.

Incision Care after Knee Arthroscopy

There are sutures (stitches) or staples in the skin where the incision(s) were made. You will need to keep the incisions completely dry for 3 days. On the 3rd day, the bandage may be removed and simple band aids applied over the incisions. If the incisions are "scabbed over" and not draining, then you may shower at this time, changing the band aids daily or as needed. You may not immerse the knee in a bath or pool until the incisions are completely healed typically at 2-3 weeks after surgery.

Doctor's Visits

At your first office your incisions and range of motion will be checked. At this visit your sutures/staples will be removed. You will return to the office on a monthly basis for the first 3 to 4 months depending on your progress. Follow-up subsequent to this will depend on your progress with rehabilitation.

Return to Activities and Work

For most patients, a return to sedentary/desk work can occur within 1- 2 weeks after the operation. Light duty work activity usually can be expected within 4-6 weeks. Aerobic exercises such as a stationary bicycle and walking can begin when you feel comfortable. Return to heavier work and sports will vary depending on the specific surgery performed. This is allowed when you are no longer experiencing any pain or swelling, full range of motion has returned, and muscle strength and endurance have been restored.

Driving

Driving is individual and depends somewhat on which side is your dominant leg. A manual vs. automatic transmission car will also make a difference.

Problems You May Encounter at Home

Drainage from the wound: It is common for a small amount of blood to show up on the outside of the dressing. If it appears excessive then call us.

High Fever: It is normal to run a low grade fever for 2 to 3 days after surgery. If your temperature is above 101.5 it may be an early sign of an infection. If you get 2 readings 3 hours apart of more than 101.5 then you need to notify us.

Increasing pain: Once the nerve block wears off the knee will be particularly sore over the first 2 to 3 days after surgery. You should start taking your oral pain

medication prior to the block wearing off so you are not trying to “catch up” to the pain. Applying ice will also help dull the pain.

Shortness of Breath or Chest Pain: Although this can occasionally be the side effect of your pain medication it could also be a sign of a blood clot. You should never ignore these symptoms and should seek medical attention immediately.

Swelling in your knee/leg; this is very common after arthroscopic knee surgery. You should frequently wiggle your ankle and toes.

FREQUENTLY ASKED QUESTIONS:

1) I am finished with physical therapy. How long do I need to keep doing my home exercises?

A routine of regular exercise is an important part of good health maintenance. Continuing the range of motion exercises will help to relieve stiffness that comes with periods of inactivity. Strengthening exercises are the ones you do with light weights or rubber bands to make your muscles work harder. If you have access to exercise facilities or water exercise classes then you can progress to doing your exercises there once you are done with formal physical therapy. These exercises should be continued for at least a year.

2) My knee feels numb around the incision. What happened?

When the skin incisions were made, the small nerves in the skin were cut. This usually subsides within 9-12 months.

3) My knee and leg are swollen. Medication and ice don't seem to make a difference.

Swelling is normal part of the body's healing process after surgery. Moving the knee, ankle and toes can help. You should wiggle your ankle/toes frequently through the day. If the swelling is getting worse rather than better then you should contact your doctor. In a small percentage of patients, a blood clot (deep venous thrombosis can develop after arthroscopic knee surgery.

4) I can't sleep at night, my knee is uncomfortable…..What can I do?

It is common for your knee discomfort to be more noticeable at night. Wearing the brace at night and/or supporting the knee with pillows can help. Never place pillows directly behind the knee because one of the most important goals after surgery is to get the knee as straight as possible. Pillows may be placed around the knee or under the heel. Turning the leg and knee together like the way you roll a log on the ground decreases the twisting effect. Using a bag of frozen vegetables or a Cryo-Cuff (specialized ice pack) for 15-20 minutes at a time can be beneficial. Place a towel between the ice pack and skin.

5) My incision looks red. Is it infected?

Localized redness around the incision is common and is considered a normal reaction. If the redness should extend beyond a half inch from the incision and there is increasing pain, tenderness or drainage then there is a possibility of infection. If you should develop these symptoms then please contact us.

6) My incision was healed but opened up at the top this morning? What should I do?

When the outside sutures/staples are removed sometimes the skin will partially open up at the surface. If this occurs you may mix hydrogen peroxide with water in a 1:1 ratio and apple with Q-tips to the open area once to twice daily. Cover the area with a Band-Aid or gauze until it is completely scabbed over.

7) I have a fever. Do you think I am getting an infection?

Low grade fevers (101.5 and below) are fairly common in the first few days after surgery. These are a reaction to the anesthesia as well as the body's inflammatory/healing response that develops after surgery. If you feel you have a fever, take your temperature. If you get two readings on a thermometer, at least 3 hours apart, of 101.5 or more then you will need to notify us. If you need to call, we will want to know when you last took your medication and what it is you are taking.

Biographical Information

Edward V.A. Lim, M.D.

Dr. Lim is a board certified and re-certified (x2) orthopaedic surgeon with primary specialty interests in joint replacement, reconstruction and trauma. Dr. Lim is currently Chairman of the Department of Orthopaedic Surgery at The Christ Hospital in Cincinnati, Ohio.

He was born in the Philippines and obtained his undergraduate degree at the University of the Philippines in Manila. He completed his medical education (MD cum laude) at the University of the Philippines-College of Medicine in 1977. Following a five-year Orthopaedic Surgery Internship and Residency program at the University of Cincinnati Medical Center, additional training included an AO Trauma Fellowship in Hannover, West Germany and Davos, Switzerland, and a second Fellowship at the University of California, San Francisco – San Francisco General Hospital. He then returned to join the faculty at the University of Cincinnati. From 1992 to 2002 Dr. Lim served as Vice Chairman and Associate Professor of the Department of Orthopaedic Surgery and Director of the Division of Orthopaedic Trauma at the University of Cincinnati Medical Center.

During this period, Dr. Lim had a busy clinical practice at University Hospital, Christ Hospital, and Good Samaritan Hospital. He was responsible for orthopaedic residency education and was actively involved with orthopaedic education in the Philippines where he returned (and continues to do so) several times each year to volunteer his time and service.

Dr. Lim has published numerous articles on orthopaedics and related topics. He continues to be an invited lecturer for educational courses throughout the United States and Asia. In 1995, he completed a Masters of Business Administration at Xavier University in Cincinnati (MBA), as well as a Physician Leadership Program through the Health Alliance in Cincinnati. In the clinical practice of orthopaedic surgery, Dr. Lim has also briefly practiced in Marietta, Ohio (1989-1992) and Richmond, Indiana (2002-2005).

Dr. Lim is a Fellow of the American Academy of Orthopaedic Surgery and an Examiner for the American Board of Orthopaedic Surgery. He also serves as an editor for the Journal of Trauma and continues to be a volunteer Associate Professor at the University Of Cincinnati Department Of Orthopaedic Surgery. He is a member of the Ohio State Medical Association, The Cincinnati Academy of Medicine, Orthopaedic Trauma Association, American Orthopaedic Association, and other orthopaedic-related organizations.

In June 2006, Dr. Lim returned home to Cincinnati to resume his orthopaedic surgery and joint replacement practice at The Christ Hospital. He maintains patient offices at The Christ Hospital MOB and the Jewish Medical offices in Kenwood, Cincinnati, Ohio.
Dr. Lim resides in Cincinnati, Ohio with his wife, Julia, and their three children, Elizabeth, Meredith, and Edward.

Biographical Information

Patrick G. Kirk, M.D.

Dr. Kirk is a board certified Orthopaedic Surgeon with primary interest in the surgical and non-surgical management of arthritis of the hip, knee and shoulder.

A graduate of Northwestern University and Rush Medical College in Chicago, he completed his Orthopaedic Residency at the Henry Ford Hospital in Detroit. Additional specialty training was at the University of Michigan, and then as a Fellow in Joint Replacement Surgery at the University of Western Ontario. There he received the Maurice Mueller Scholarship for the study of Diseases of the Hip.

Since starting practice Dr. Kirk has performed over 5000 hip and knee replacements. His current interests include minimally invasive hip and knee replacement surgery. Dr. Kirk has published numerous articles on hip and knee replacements and other aspects of orthopaedics, and has authored a textbook chapter on Revision Total Knee Replacement Surgery.

He is a Fellow of the American Academy of Orthopaedic Surgery, a member of the American Association of Hip and Knee Surgeons, the Mid-American Orthopaedic Society, the Ohio Orthopaedic Society, the Cincinnati Orthopaedic Club, the Cincinnati Academy of Medicine, and the Ohio State Medical Society.

He currently serves on the Orthopaedic Executive Committee of The Christ Hospital. He is on the Board of Trustees of the Arthritis Foundation, Ohio River Valley Chapter. He also serves on the Board of Trustees for the Cincinnati Symphony Orchestra.

Dr. Kirk and his wife, Mary, have two children, Margaret and Caroline.

The Christ Hospital
2139 Auburn Ave
585-2000

Your Pre-Admission Tests (PAT) are done within 7-10 days prior to you surgery. The Christ Hospital will call and schedule your PAT appointment. An assessment nurse will review your medications and instruct about medications the morning of surgery. Written instructions are given at your PAT visit or faxed to your primary care physician if that is where your PAT is being done. You can reach the assessment nurses at 585-1720.

For PAT, you come to Suite 130 of the Medical Office Building. If you need to contact the PAT desk, their number is 585-2880 or 585-2881.

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 that within a day or two of your surgery.

If you need to reach Christ Hospital PAT, their number is 585-2418.

The day of your surgery, you check in at Same Day Surgery, B level. You and your family should park on B level of the Same Day Surgery Garage on Mason Street. Directions are on your instruction sheet from the hospital.

There is a Family Surgical Lounge where your family may wait and someone will guide them to it. When your surgery has been completed, your surgeon will come to the lounge and speak with them in one of the consultation rooms. If you need to contact the Family Surgical Lounge, the telephone there is 585-3238.

Once your vital signs are stable and your room is ready, they will notify your family that you have been moved to your room. Your family may see you once you have been transferred to your room. Our patients generally go to the Orthopaedic floor, which is 2 South (585-2553).

Maps and Directions

Driving Directions

From the north (I-75 South)

Take I-75 South to Exit 7, Norwood/Route 562. Take 562 East to I-71 South to the Taft Road exit. Continue on Taft (a one-way street) to the fifth traffic light. Turn left onto Auburn. The hospital entrance is at the third traffic light on the right.

From the northeast (I-71 South)

Take I-71 South to the Taft Road exit. Continue on Taft (a one-way street) to the fifth traffic light. Turn left onto Auburn. The hospital entrance is at the third traffic light on the right.

From downtown (I-71 North)

Take Reading Road-Eden Park Drive exit (on left). Take the Eden Park Drive- Dorchester lane (right lane) of that exit. Turn left at traffic light onto Dorchester. At top of hill, turn right onto Auburn. Hospital entrance is on the left at the second traffic light.

From downtown (Main/Vine/Elm)

Take Main, Vine or Elm north; turn right onto Liberty. Turn left onto Sycamore. At top of hill, turn left onto Auburn. Hospital entrance is at second traffic light on the left.

From Kentucky (I-75)

Take I-75 North to I-71 North to the Reading Road-Eden Park Drive exit (on left). Take the Eden Park Drive-Dorchester lane (right lane) of that exit. Turn left at traffic light onto Dorchester. At top of hill, turn right onto auburn. Hospital entrance is on the left at the second traffic light.

From Kentucky (I-471 North)

Take I-471 North to Liberty Street exit (third exit past bridge). Take Liberty to the first traffic light after the exit and turn right onto
Sycamore. At top of hill, turn left onto Auburn. Hospital entrance is at the second traffic light on the left.

Parking

Parking is free in the visitor garage adjacent to the hospital. Enter the garage from the Patient Tower entrance on Auburn Avenue. Park on any level except Level A, which is reserved for physician parking.

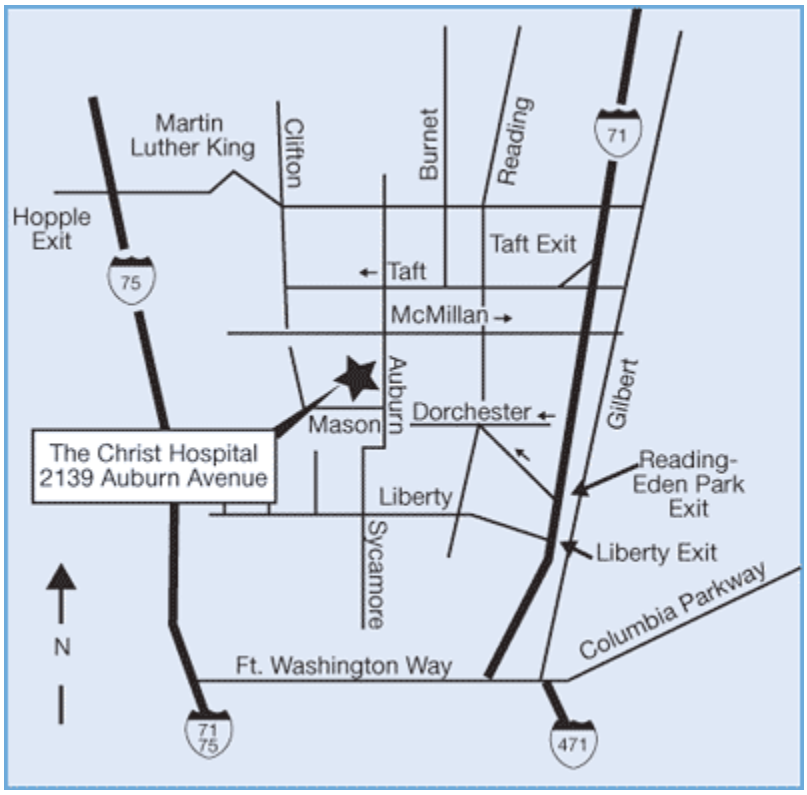
To reach patient floors, enter the hospital at the Patient tower entrance.
To reach admitting, testing or surgery, enter the hospital at the courtyard Atrium entrance.
You can reach the medical office building from any level of the garage at entrances located near the Patient tower entrance.

If you'd like more information or directions from another location, call 585-1200.

Valet Parking

The Christ Hospital is offering a new valet service for our guests. We have teamed-up with parking solutions to offer valet parking services for $3. This service is available from 6:30 a.m. to 6:30 p.m. The last car will be parked at 4 p.m. so all of the cars can be returned by 6:30 p.m. As always there will not be a charge for self-service parking.

Local Street Map

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