Knee Surgery: What to Expect

This booklet was designed to guide you through your TOTAL KNEE REPLACEMENT. Our goal is to return you to your activities of daily living as well as many other activities that you have been missing due to your pain and stiffness in your knee. We will explain the Total Knee Arthroplasty procedure, activities and exercises you will learn and the care you will receive.
Kevin J. Bozic, MD, MBA is an Associate Professor and Vice Chair in the Department of Orthopaedic Surgery and a member of the core faculty of the Philip R. Lee Institute for Health Policy Studies at the University of California, San Francisco (UCSF). Dr. Bozic is a graduate of the UCSF School of Medicine and the Harvard Combined Orthopaedic Residency Program. Additionally, he holds a Bachelor of Science degree in Biomedical Engineering from Duke University and a Masters of Business Administration from Harvard Business School. Dr. Bozic has fellowship training in Adult Reconstructive Surgery from Rush Medical College in Chicago.

Dr. Bozic's clinical interests are in adult reconstructive surgery of the hip and knee, with an emphasis on primary and revision hip and knee replacement. His research interests are broadly in the fields of health policy and health care services research, and specifically in the areas of health care technology assessment, cost-effectiveness analysis, shared decision making, and the impact of health care reform on cost and quality. In addition to his clinical and research activities, Dr. Bozic is actively involved in numerous regional and national health policy initiatives, including the Medicare Evidence Development and Coverage Analysis Committee (MedCAC), the Agency for Healthcare Research and Quality's (AHRQ) Effective Healthcare Stakeholder Group, the Integrated Healthcare Association's Value Assessment of Medical Technologies Program, and the California Health Care Foundation's orthopaedic registry project.

Dr. Bozic also holds both regional and national leadership positions, as Second Vice President of the California Orthopaedic Association, Board of Trustees of the Orthopaedic Research and Education Foundation (OREF) and the Board of Directors of the American Joint Replacement Registry (AJRR), and as Chair of the American Association of Orthopaedic Surgery (AAOS) Health Care Systems Committee.

Dr. Bozic has been the recipient of numerous awards and honors, including the Orthopaedic Research and Education Foundation's Clinical Research Award, the American Academy of Orthopaedic Surgeon's Clinician-Scientist Travelling Fellowship Award, the American Orthopaedic Association's American-British-Canadian Traveling Fellowship Award, the American Association of Hip and Knee Surgeon's James. A Rand Young Investigator Award, and the Orthopaedic Research Society's William Harris Award.

Since arriving at UCSF, Dr. Bozic has received extramural funding for his research from the OREF, AHRQ, and the National Institutes of Health (NIH).

Visit the link below to view Dr. Bozic’s UCSF Mini-Med School presentation, “Osteoarthritis Care in the 21st Century: Remarkable Advances in Joint Replacement”

http://orthosurg.ucsf.edu/Kevin.Bozic
Introducing Your Surgeon

Dr. Vail is Professor and Chairman of the Department of Orthopaedic Surgery at the University of California, San Francisco. He is a specialist on surgical treatment of conditions of the hip and knee. His research focuses on performance and outcomes of surgical procedures and devices, delivery of care in adult reconstruction, and cartilage repair strategies.

After graduating from the Duke University School of Engineering cum laude with a degree in Mechanical Engineering and Materials Science, he earned his medical degree at the Stritch School of Medicine at Loyola University, Chicago. He completed his internship in General and Thoracic surgery and residency in Orthopaedic surgery at Duke University Medical Center, and then went on to complete a fellowship in Adult Reconstructive Surgery. Dr. Vail was part of the faculty at Duke University Medical Center where he advanced from Assistant Professor to Professor and Director of Adult Reconstructive surgery. In January of 2007, he was named Professor and Chairman of the Department of Orthopaedic Surgery at the University of California, San Francisco.

Dr. Vail has published several hundred scientific articles, abstracts, book chapters and educational materials. He is presently in the Presidential line of the American Association of Hip and Knee surgeons, and was recently named to the American Board of Orthopaedic Surgery. His wife Lisa also received her medical degree from Loyola. They have two children Brennan and Parker.

For more background information regarding Dr. Vail, visit the weblink:

http://orthosurg.ucsf.edu/Thomas.Vail
Dr. Hansen received his undergraduate degree in human biology from Stanford University. He received his medical degree and completed an orthopaedic surgery residency at the University of California, San Francisco. Dr. Hansen then served as a fellow in adult reconstructive surgery at the Rothman Institute at Thomas Jefferson university in Philadelphia.

Dr. Hansen’s clinic focus includes adult reconstructive surgery of the hip and knee and primary/revision total hip and knee replacement procedures. He also has a clinical and academic interest in the direct anterior hip approach for hip joint replacement. His current research focuses on the diagnosis, treatment and prevention of periprosthetic joint infection. Dr. Hansen will direct the prospective total joint database, as well as create a separate, but fully integrated, periprosthetic infection database.

For more background information regarding Dr. Hansen, visit the weblink:

http://orthosurg.ucsf.edu/Erik.Hansen
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Most information in this pamphlet can also be accessed online at:

http://orthosurg.ucsf.edu/patient-care

Then click on “Arthritis & Joint Replacement”
Arthritis of the Knee

The normal knee is made of bone, muscle, cartilage, ligaments, and tendons to lend stability to a joint designed to move in one direction. A normal knee glides smoothly because cartilage covers the ends of the bones that form joints. Loss of the protective cartilage which covers the ends of the bones may cause the unprotected bone to rub against unprotected bone – a very painful condition. Osteoarthritis of the knee damages this cartilage, progressively wearing it away. The ends of the bones become rough like sandpaper. This damaged cartilage can cause the joint to "stick" or lock and your knee may get painful, stiff and lose range of motion.

There are 3 basic types of arthritis that may affect the knee joint.

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

- **Rheumatoid Arthritis:** Rheumatoid arthritis (RA) is an inflammatory type of arthritis that can destroy the joint cartilage. RA can occur at any age. RA generally affects both knees.

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

All 3 types of arthritis are degenerative in nature, characterized by joint pain, stiffness, inflammation, progressive functional limitation and ultimately, severe disability. These diseases are common indications for total knee replacement (also known as arthroplasty).
Arthritis of the Knee

Signs and Symptoms

If your knee is severely damaged by arthritis or injury, it may be hard for you to perform simple activities such as walking or climbing stairs. Generally, the pain associated with arthritis develops gradually, although sudden onset is also possible. Pain and swelling are worse in the morning or after a period of inactivity. You may even begin to feel pain while you're sitting or lying down. You may find it hard to walk more than a few blocks without significant pain and you may need to use a cane or walker. An additional symptom may be failure to get pain relief from non-steroidal anti-inflammatory drugs. These medications, including aspirin and ibuprofen, often are most effective in the early stages of arthritis. Their effectiveness varies from person to person and may become less effective for patients with severe arthritis.

Diagnosis

Your surgeon will take your medical history, gather information about your general health and ask you about the extent of your knee pain and your ability to function. A physical examination will be taken to assess your knee stability, strength and overall leg alignment. Your doctor will perform a physical examination that focuses on your walk, the range of motion in the limb, and joint swelling or tenderness. X-rays typically show a loss of joint space in the affected knee.

Treatment

The purpose of treatment is to reduce pain, increase function and generally reduce your symptoms. Patient satisfaction is a fundamental goal in treating osteoarthritis of the knee. In its early stages, arthritis of the knee is treated with nonsurgical measures. Nonsurgical treatments fall into five major groups: lifestyle modifications, exercise, supportive devices, other methods, drug treatment.

- Lifestyle Modification can include losing weight, switching from running or jumping exercises to swimming or cycling, and minimizing activities that aggravate the condition, such as climbing stairs.
- Exercise can help increase range of motion and flexibility as well as help strengthen the muscles in the leg.
- Using supportive devices, such as a cane, wearing energy-absorbing shoes or inserts, or wearing a brace or knee sleeve can be helpful.
- Other measures may include application of heat or ice, or water exercises.
- Anti-inflammatory medications are usually the first choice of therapy for osteoarthritis of the knee. These drugs, which include brands such as Motrin, Advil and Aleve. Anti-inflammatory medications help to reduce inflammation in the joint. Simple pain relievers such as Tylenol are available without a prescription and can be very effective in reducing pain.
Arthritis of the Knee

What is a Total Knee Arthroplasty (aka Replacement)

Inability to tolerate or complications from pain medications or failure to substantially improve with other treatments such as cortisone injections, physical therapy or other surgeries may suggest a knee operation.

Total knee replacement surgery can help relieve your pain, correct your leg deformity and help you resume your normal activities. Total knee replacement is done to replace the worn, painful knee joint with a prosthesis made of titanium and a plastic polyethylene insert. The end of the femur (thigh bone) and the upper end of the tibia (lower leg) are replaced with titanium parts and the plastic insert is placed between the titanium parts. This procedure also restores the alignment and function of your knee. The decision to have total knee replacement surgery should involve you, your family, your family physician and your orthopedic surgeon.

Visit our website to take on the role of the surgeon throughout a virtual knee replacement surgery:

Prosthesis Information

The average lifespan of the prosthesis is 15 years. Eventually, due to continuous movement and friction between the different parts of your implant, certain surfaces may wear out and need replacement.

Your knee prosthesis will set off metal detectors. Due to increased security at airports, security personnel will not accept airport cards, doctor’s notes, or medical records as proof that you have had a knee replacement. Therefore, you will need to arrive at airports early to give yourself enough time to go through security. Inform airport security that you have a knee prosthesis before going through the metal detector.

As with every surgical procedure, there are risks and potential complications in joint replacement. Individual results may vary, and success depends on factors such as age, weight and activity level.
Total knee replacement

Total knee surgery removes the damaged and painful areas of the femur (thigh bone) and tibia (lower leg bone). These areas are then replaced with specially designed metal and plastic parts.

**STEP 1**
The damaged portions of the femur bone and cartilage are cut away. The end of the femur bone is reshaped to allow the metal femoral component to fit on it.

**STEP 2**
The metal component is attached to the end of the femur using bone cement.

**STEP 3**
The damaged portions of the tibia bone and cartilage are cut away. The tibia end is reshaped to receive the metal component.

**STEP 4**
The metal component for the tibia is secured to the end of the tibia bone using bone cement.

**STEP 5**
A plastic plate is attached to the tibial component. The plate will support the body’s weight and allow the femur to move over the tibia smoothly.

**STEP 6**
To make sure the patella, or knee cap, glides smoothly over the new artificial knee, its rear surface is prepared to receive a plastic component, which is cemented into place.
Preparing for Knee Replacement Surgery

If after undergoing an orthopedic evaluation, you and your surgeon decide that knee replacement surgery is the best possible treatment for you, our team of medical experts will provide you with information on how to prepare for the procedure.

Medical Preparations

You should be in the best possible health before your surgery. If you are overweight, your doctor may suggest that you lose weight. If you smoke, it is mandatory that you stop prior to your surgery because smoking can change blood flow patterns and delay healing and recovery. Smoking is not allowed during your hospitalization. Consult with your primary care provider if you need help to lose weight or to stop smoking.

Be sure to tell your orthopedic surgeon about all medications that you are taking. In addition, if you develop any kind of infection prior to surgery, such as a cold or dental infection, notify your surgeon immediately. If you have a cardiologist (specialist heart doctor), make an appointment as soon as you can to have a complete physical to rule out any medical problems that may interfere with your surgery. Your orthopaedic surgeon will let you know if it is also recommended that you see your primary care provider before having surgery.

Your surgeon’s office will otherwise schedule your required pre-operative and post-operative appointments. We will notify you as soon as the appointments are scheduled with a phone call and mail you a letter for your records indicating the date, time, and location. Please do not lose this letter as it will contain important information regarding all your necessary appointments.

The surgery, pre-op class and Prepare appointment are located at
505 Parnassus Ave, San Francisco, CA 94143
All appointments after surgery are located at
1500 Owens St, 4th floor, San Francisco, CA 94158

Blood Donation

Most patients who undergo knee replacement will not need a blood transfusion post operatively. However, patients may donate blood for themselves prior to an elective surgery if recommended by your surgeon. This is called autologous donation. A special processing fee may be charged for this service because additional recordkeeping and handling are required, even if the blood is not used by the donor this blood cannot be used for other patients. Please confirm with your insurance about fee coverage and additional costs associated with transportation if donating outside the local area. If it is recommended by your physician to donate blood, you should start donating no sooner than 35 days prior to surgery, but no later than seven working days prior to the surgery date. However, in special circumstances blood donation may not be appropriate for you, and therefore volunteer blood is available from the blood bank if needed.

If you have any questions about blood donation or hours, call Blood Centers of the Pacific at 1-800-215-6225. Blood Centers of the Pacific in San Francisco is located at 270 Masonic Avenue, San Francisco, CA 94118.
Preparing for Knee Replacement Surgery:
PREPARE Appointment

In order for our team to ensure that you are in optimal health prior to your procedure, you will be assessed by one of UCSF’s nurse practitioners (NPs) prior to the day of surgery. Depending on your health status, this assessment will either take place over the phone “phone consult” or in-person at the PREPARE Clinic which is located at UCSF Moffitt-Long Hospital 505 Parnassus Avenue, First Floor, Room L-171.

In order for the PREPARE Clinic to determine which type of appointment is most appropriate for you, you will fill out a brief health questionnaire at your doctor’s visit when scheduling surgery. Once completed, the PREPARE Clinic will determine the type and length of appointment that is most appropriate for you. We will notify you as soon as the appointment is booked. We will call you and mail you a letter indicating the date and time of your PREPARE appointment.

NOTE: All in-person appointments will be scheduled for the same day as the hip/knee class.

Your surgeon may require laboratory or other diagnostics tests be performed prior to surgery. If you are evaluated in-person in the PREPARE Clinic, these tests will be performed during your PREPARE appointment.

If you are assessed over the phone (“phone consult”), a member of the PREPARE team will give you explicit instructions on when and where to have these studies done.
In order to plan for a smooth operation and recovery, we frequently need to review records from the other health care facilities where you receive care. If you have had any of the studies listed below, please arrange to have the reports faxed to the PREPARE Clinic as soon as possible. Delays in obtaining these records may lead to a delay or cancelation of your upcoming procedure.

**Please Fax the following records to 415-353-8577 as soon as possible.**

1. Recent note from your primary care provider (within 6 months)
2. Recent blood work (within 6 months)
3. Stress test
4. Echocardiogram (Echo)
5. Electrocardiogram (EKG)
6. Cardiac catheterization
7. Pacemaker or ICD (Implantable defibrillator)
8. Clinic notes from any specialist who has evaluated you in the past 2 years (for example a cardiologist; pulmonologist; hematologist; or nephrologist)

All of your health records will be reviewed by an anesthesia provider prior to the day of surgery. However, you will not meet the anesthesiologist assigned to take care of you until the day of surgery. During your PREPARE Clinic assessment, an anesthesia provider will answer all questions regarding your anesthetic options; preoperative medication management; and when to stop eating prior to the day of surgery.

Some medications require special consideration. If you take medications to thin your blood (“blood thinners”) such as Coumadin (Warfarin); Plavix (Clopidogrel); Pradaxa (Dabigatran); Rivaroxaban (Xarelto); or Aspirin it may not be safe for you to stop these medications. Specifically, if you have a history of **stents in your heart; a clot in your leg (DVT); a mechanical valve in your heart; atrial fibrillation; and/or have been diagnosed with a hypercoagulable state (blood clotting disorder)** you will need to check with the physician who prescribes this medication to determine if it is safe to stop.

Seven days prior to surgery, you should stop taking all non-steroidal anti-inflammatory drugs (NSAIDS). Examples of the NSAIDS include Aleve, Motrin, Ibuprofen, Advil and Naproxen. If you are not sure whether or not the anti-inflammatory agent you are taking must be discontinued in advance of surgery, please call the Prepare Clinic at 415-353-1480 and ask to speak with one of the nurse practitioners. You may continue taking Celebrex, Tylenol, or narcotics for pain management up until and on the morning of surgery.

Please do not have anything to eat or drink after midnight the evening before your surgery. Also, please do not chew gum the morning before surgery. You may small sips of water with your medications. However, no other food or liquids should be consumed on the day of surgery.
Preparing for Knee Replacement Surgery

Preoperative Knee Class

You will need to attend a mandatory pre-operative knee arthroplasty class which is usually on the same day as your PREPARE appointment. The class lasts 1 hour and 30 minutes. We will notify you as soon as the class is scheduled with a phone call and mail you a letter for your records indicating the date, time, and location. Bring any questions you have regarding your upcoming surgery.

At the preoperative class you may be given a prescription for Lovenox (generic drug name enoxaparin), which is a blood thinner injection you are required to take after surgery. It is a medication that will thin your blood and make it less likely for you to develop a blood clot. It is available only as an injection. The injection is a very small needle that goes into the fat tissue of your abdomen (stomach).

You will start taking Lovenox the day after your surgery and continue it for 10 more days once you are home. The nurses in the hospital will teach you how to give yourself the injection. We can also teach a caregiver to give you the injection as well. Once you have picked up Lovenox, leave it at home and keep the medication at room temperature.

Most of the time we are able to send the Lovenox prescription right to your pharmacy. Please pick up the medication and leave it at home for AFTER your surgery.

Lodging

UCSF Medical Center does not offer specific on-site house for patients to stay the day before surgery or for families during the patient’s hospitalization. However, we do maintain listings of hotel and motel accommodations. For lodging information, please call Patient Lodging at (888) 689-8273 or (415) 476-1765. The listing can also be accessed online at:

http://campuslifeservices.ucsf.edu/housing/off_campus/lodging/pdfs/STLG.pdf

There is also a free direct-dial hotel phone service located on the first floor of the Moffitt wing of the hospital near the main lobby in room M-190. The direct-dial service provides direct contact to more than 20 hotels. Maps of selected hotels and displays of hotel information also are available.
Preparing for Knee Replacement Surgery
Dental Evaluation

We recommend avoiding any dental work 4 weeks prior to surgery and 6 weeks after your surgery. Significant dental conditions and problems should be treated as soon as possible, but no later than one month before surgery.

Although postoperative dental and surgical procedures were formerly considered a risk factor for infection in arthroplasty patients, the Academy of Orthopaedic Surgery (AAOS) and the American Dental Association (ADA) no longer recommend prophylactic antibiotics for patients with prosthetic joints. However if there is any concern of an active dental infection, this should be evaluated and treated immediately by your dentist which may include antibiotics. Although uncommon, an untreated infection in one part of the body can cause bacteria to enter your bloodstream, possibly resulting in infection of your prosthesis. In addition, prompt treatment of infections, particularly involving the skin and urinary tract, are also important.

If you or your dentist have any questions, concerns, or wish to request additional information, please contact our office.
Preparing for Knee Replacement Surgery

Insurance

Once your surgery has been scheduled, your surgeon’s office will obtain insurance authorization for the surgery. Contact your insurance company for specific insurance coverage information, including copay and deductible costs, or access the following UCSF web link:

http://www.ucsfhealth.org/adult/patient_guide/health_insurance.html

If you have any questions about your ability to pay or other financial concerns, call UCSF Financial Counseling at (415) 353-1966, Monday through Friday between 8am and 6pm. If you have questions about your bill, call the telephone number printed on the bottom portion of the statement.

Disability Forms

Orthopaedic practices see a large number of disability forms because a significant portion of our practice deals with diagnosis that may lead to some level of temporary disability. Considerable staff time is involved in obtaining the necessary medical information from your records onto the disability forms. Therefore, there is a non-refundable disability form processing fee:

- $25 – one page for doctor to fill out

Allow 5 to 7 business days for our office to complete the forms. Payment in full is required beforehand. Once completed the forms can be picked up in person at 1500 Owens St., 4th floor, San Francisco, CA 94158. You can also provide us with a pre-addressed stamped envelope if you prefer the forms to be mailed.

Advance Directives

We strongly encourage all patients to complete an advance health care directive form. This form allows a patient to state his or her preferences for medical treatments, as well as to legally designate an agent or person to make health care decisions if the patient is unable to do so or if the patient chooses to have someone else make their health care decisions or them. If you already have an Advance Directive, provide us with a copy for your records when you check in the day of your surgery. There is also an option of completing an oral advance health care directive where you can tell your doctor about your preferences for medical treatment and it will be documented in your chart.

If you would like more information or would like to request an advance directive form, contact Social Work Department at (415) 353-1504 or Patient Relations at (415) 353-1936.
Preparing for Knee Replacement Surgery

Home Preparations

It is recommended that you plan for your return home prior to your admission to the hospital so that you are as comfortable as possible. Below are some recommendations for organizing your home to prevent any accidental falls:

• Make clear pathways in crowded areas
• Eliminate all throw rugs
• Secure extension cords and telephone cords strung across the floor
• Place all commonly used items at a level so that you can easily reach them

Packing for Your Hospital Stay

It is best to minimize belongings you bring to the hospital and pack a small suitcase for your hospital stay that includes:

• A list of all medications you are taking. Do not bring your own medications as the hospital will provide you with your usual medications
• Personal hygiene items
• Important medical devices (ie hearing aids, eyeglasses, CPAP machine)
• Comfortable and loose clothing
• Slip-on shoes
• 2 forms of identification to check in for surgery: one ID must have your picture and the second ID can be any other card that has your name
• You may bring a cell phone if you wish. Please label your charger and phone with your name.

Leave all of your valuables, including jewelry, wallet and watches at home. Have your support person bring a walker or crutches (if you have them) to the hospital on the day of discharge. If you don’t have a walker or crutches, either would be provided for you to take home.

The Week Before Surgery

To assist in the prevention of a surgical site infection Chlorhexidine (Hibiclens) soap will be provided at your doctor’s visit and/or at the PREPARE visit. Please wash with the soap daily 2 nights before in addition to the morning of your surgery, for a total of 3 washes. Avoid using the Chlorhexidine soap on your face and private genital area. You may also use any over-the-counter anti-bacterial soap if you do not have the Chlorhexidine soap.

THE DAY BEFORE SURGERY:
• Your surgeon’s office will call to confirm your surgery and scheduled admission times.
• Eat a light meal for dinner with no alcohol. You may not eat or drink anything after midnight the night before your surgery.
• Take your routine medication, as instructed by PREPARE staff, with a small sip of water.
• Try to rest and go to bed early.
Preparing for Knee Replacement Surgery

Increase Iron in Your Body

You can expect to be somewhat anemic (low red blood cells) after your surgery. It takes at least 3 months for your body to regenerate the red blood cells to a normal level. For this reason, we recommend you start increasing iron in your body starting one month before surgery or ASAP if your surgery date is in less than one month. Continue taking iron for one month after surgery. You may buy any brand of iron supplements over-the-counter and follow the directions on the bottle. If you cannot tolerate iron pills you may substitute by eating a diet rich in iron instead. Below are some foods rich in iron.

<table>
<thead>
<tr>
<th>Vegetables/Fruits</th>
<th>Grains</th>
<th>Seafood/Meat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spinach</td>
<td>Whole wheat bread</td>
<td>Shrimp</td>
</tr>
<tr>
<td>Beet greens</td>
<td>Bran cereals, tortillas</td>
<td>Tuna, Dried Cod,</td>
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<tr>
<td>Sweet Potatoes</td>
<td>Oat cereal, Cream of Wheat</td>
<td>Sardines, Oysters</td>
</tr>
<tr>
<td>Peas</td>
<td>Rye Bread</td>
<td>Mackerel, Scallops</td>
</tr>
<tr>
<td>Broccoli</td>
<td>Enriched rice</td>
<td>Liver, Beef, Lamb</td>
</tr>
<tr>
<td>String beans</td>
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<td>Ham, Turkey,</td>
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<tr>
<td>Collards</td>
<td>Other Foods</td>
<td>Chicken</td>
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<tr>
<td>Kale, Chard</td>
<td>Eggs</td>
<td>Veal, Pork</td>
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<tr>
<td>Prunes</td>
<td>Dried Peas, beans</td>
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<tr>
<td>Watermelon</td>
<td>Lentils, Nut butter</td>
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<tr>
<td>Dried apricots, peaches</td>
<td>Molasses</td>
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Preparing for Knee Replacement Surgery

Help at Home

Most patients after joint surgery go home after leaving the hospital. Insurance very rarely, if ever, will cover help at home for bathing, dressing, cooking, or cleaning. It is most important for you to consider the kind of help you will need and mobilize your friends and family to assist you (with shopping, cleaning, errands, transportation etc). Decide ahead of time who will be able to help you and talk with them about your concerns. You may need help from family and friends with cleaning, shopping and other errands for a week or two. Arranging meals that can be stored and frozen and stocking up on prepared foods will eliminate extra work for your caregiver.

You should plan ahead and arrange for family or friends to drive you home from the hospital. You will be most comfortable in a sedan-type car. In addition, You will not be allowed to drive for 3-6 weeks or longer so you may want to plan transportation to and from your post-surgical and physical therapy appointments.

Inpatient Rehabilitation and Skilled Nursing Facilities

The Physical and Occupational Therapists (also known as PT & OT) will evaluate you postoperatively while you are in the hospital and help the doctors to determine what level of therapy you will need after you leave the hospital. Our Case Managers in the hospital will obtain insurance authorization and arrange for one of the following 3 options.

• Home with a physical therapist coming to your home or with outpatient physical therapy. You will have approximately 2 visits each week with the physical therapist. The vast majority of our patients will be going home after joint replacement.

• Rehabilitation Hospitals are for patients who the therapist and doctors feel require 3 hrs every day of PT and OT because it is unsafe for the patient to go home. If you are able to get out of bed without help and walk with a walker or crutches then it will be unlikely that you will qualify for inpatient rehabilitation stay.

• Skilled Nursing Facilities (also called Nursing Homes or Convalescent Homes) are for those who need PT, are still unsafe to go home, but no longer need to be in the hospital and do not qualify for inpatient rehabilitation . At most Skilled Nursing Facilities the patient rooms are shared and there are usually no televisions, sometimes no bedside phones.

There are certain conditions that may increase the likelihood that you may qualify for a short stay in an inpatient rehabilitation facility. These include having a history of stroke, bilateral (both side) joint replacement, or a spinal disorder.
After admission, you will move into the pre-operative area where you will be evaluated by your anesthesiologist. The most common type of anesthesia, in which you are given anesthesia through an intravenous (IV) drip that keeps you asleep for the entire surgery. Your anesthesiologist also may offer you an epidural or spinal injection or a combination of the above. You will discuss this with your anesthesiologist before your surgery.

The surgery usually takes one to two hours, depending on the severity of the arthritis in your knee. In the operating room, a urinary catheter will be inserted and left in place for one day. A drain tube may be inserted into your incision to draw out excess fluid. As you recover, the drainage will stop and the tube will be removed before you leave the hospital.

After surgery you will be moved into the recovery room, where you will stay for approximately 3 to 4 hours. During this time, you will be monitored until you awaken, at which time you will be taken to your hospital room.

**Discharge from the Hospital**

Your hospital stay will be 2-3 nights. To help assist with the patient flow in the hospital we aim for a discharge time of 10 AM. However, the hospital discharges patients at anytime during the day, 7 days a week.

The staff can help you pack up your belongings. Please send your ride to bring the car to the horseshoe driveway in front of the main hospital entrance 10 minutes before you are ready to leave the hospital. Notify your nurse when you are ready to leave. Our Hospitality Service will assist you downstairs in a wheelchair along with your belongings.

**Your Room**

Your room assignment is based on your medical condition and bed availability on the day of your admission. We try to honor each patient’s preference whenever possible. However, at times, other arrangements may be necessary due to your doctor’s order or other circumstances. A staff member will show you how to operate your hospital bed and the nurse call system. If you have any questions, please ask your nurse.

To call your nurse, use the call button located at your bedside and on the wall in every bathroom. A staff member will respond as soon as possible.

- **For your safety,** always use your call button to request assistance getting out of bed, as unfamiliar surroundings and sleeping medications may contribute to confusion or a possible fall. For more information, read about how you can help prevent falls in the Safety section.

- **Leaving the nursing floor:** For your safety and protection, patients are not allowed to leave the hospital floor unless accompanied by a staff member.
Your Hospital Stay

Visiting Hours

We understand that the presence of family and friends is important to your well-being. Visiting hours are 10am until 7pm every day of the week. Adult visitors are welcome. To protect our patients from childhood illnesses, children under the age of 12 are not permitted in patient areas without special authorization from our staff. We also ask that visitors who have coughs and colds do not visit until they are well enough to prevent the spread of illnesses to our patients.

Overnight Stays

We understand how important it is for some patients to have a family member spend the night with them. A family member may be allowed to spend the night with you if you are in a private room. However, for the safety and consideration of our patients, as well as to respect patient privacy, overnight stays are not allowed in semi-private rooms. Please let your nurse know if you would like to have a family member stay overnight.

Patient Meals

Nutrition is an important part of your care while you are in the hospital. If you are on a special diet ordered by your doctor, you will receive menus designed to meet your specific needs. Let us know if you have any food allergies or food intolerances as well as any foods you particularly dislike.

A menu for each day’s meals will be included on your breakfast tray. Mark your preferences and leave it in your room, where a food service assistant will pick it up. The food service assistant can answer any questions you have about available foods. If you have any questions about your meals or if you have any special requests, please ask your nurse.

If someone wants to bring you food from home or a restaurant, first talk with your doctor or nurse to make sure that these foods are approved for your specific diet and condition and that they are properly prepared, stored, and labeled. For your safety and protection, patients are not allowed to leave their hospital floor to go to the cafeteria.

You may eat after surgery as soon as your body can tolerate the food. We recommend you first try some ice chips and crackers to ensure that your stomach can tolerate having liquid and foods.
Your Safety in the Hospital

Preventing Falls

Each year across the United States hundreds of people fall in hospitals. Many of those people were very independent at home and probably were not worried about falling. A fall during your hospital stay can cause pain, injury, or even death. Although some falls cannot be avoided, by following our safety rules, you, your family, and friends can help reduce your risk of falling. If you have had a fall before coming to the hospital, please tell your doctor or nurse.

All patients are screened for their risk of falling upon admission. If you are at a high risk for a fall, you will be placed on special Fall Risk Precautions. Safety measures will be used to prevent you from falling. These include a “Fall Sticker” placed on the door of your room, a yellow wristband, and yellow non-skid socks to wear, showing that you are at risk for falling. Fall and injuries are unexpected and can occur at any time. Your help and cooperation is appreciated.

Factors That May Affect You and Increase Your Risk of Falling

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being in a new environment</td>
<td>Being in a different surrounding can cause you to become confused or disoriented</td>
</tr>
<tr>
<td>Taking medications</td>
<td>Some medications may cause you to feel dizzy or light-headed. Some medications can affect your balance or perception</td>
</tr>
<tr>
<td>Urgent need to go to the bathroom</td>
<td>If you often get urgent needs to go to the bathroom, tell the nurse when you are admitted to your room. The amount of assistance provided can be adjusted to your needs.</td>
</tr>
<tr>
<td>Anesthesia</td>
<td>Anesthesia and sedation can make you groggy and affect your balance and judgment. You make not realize this until after you try to stand or walk.</td>
</tr>
<tr>
<td>Pain &amp; Weakness</td>
<td>Occurs after knee replacement surgery which can cause you to be unbalanced after surgery</td>
</tr>
<tr>
<td>Prior falls, slips, or trips</td>
<td>If you have a history of falls or have fallen recently, you may be more likely to fall again</td>
</tr>
<tr>
<td>Physical and mental conditions</td>
<td>Certain cardiovascular diseases, disorders affecting the legs and feet, strokes, and vision problems can affect your ability to walk and interfere with your balance and perception. Depression, anxiety, and dementia can cause confusion or disorientation and increase your risk of falling.</td>
</tr>
<tr>
<td>Age</td>
<td>As you age, typically you lose strength, become less flexible and may lose some ability to control your balance</td>
</tr>
</tbody>
</table>
Your Safety in the Hospital

Preventing Falls

How can you prevent falls?

- Do not get out of bed or out of a chair by yourself. Use the call button by your bed or in the bathroom and wait for a trained staff member to help you.
- Tell your nurse if you feel dizzy or light-headed.
- Get out of bed slowly. Sit on the side of the bed and move your ankles and squeeze your fists. Use a walker to rise from the seated position slowly.
- Move slowly and carefully until you know how medications, treatments, and procedures affect you.
- Wear non-skid slippers or socks when walking.
- If you usually wear eyeglasses, wear them in the hospital.
- Never use the rolling bedside table, or any other wheeled furniture or equipment, such as the intravenous poles, for support or balance.
- Learn where things are. Be sure clutter is cleared from areas where you may walk.
- Turn the light on before you attempt to get out of bed.
- Be sure to have all your belongings within reach, including the call light, telephone, and bedside table.
- Follow your healthcare team’s instructions about staying in bed or whether you must have help to go to the bathroom.
- If you notice a spill on the floor, let the staff know so that we can take care of it to prevent someone from falling

Note to Family and Friends

If your loved one seems confused or you believe he or she is at risk of falling, and you have to leave the hospital room, be sure to tell the staff before you leave the room.
A pressure ulcer, or bedsore, is a serious problem in the hospital and at home. Pressure ulcers can slow your recovery, causing pain, infections and other problems.

What is a Pressure Ulcer?

A pressure ulcer is an injury to the skin and the tissue beneath it. It is caused by pressure on the skin. Pressure ulcers tend to occur over bony body parts (elbow, heel, hip, etc.) that you sit or lie on for long periods of time. The pressure squeezes tiny blood vessels that supply the skin with nutrients and oxygen. When skin goes without nutrients and oxygen for too long, a pressure ulcer forms. The area turns red at first. Unless treated quickly (changing your position, for example), the pressure can damage the skin and muscles.

Pressure ulcers are more likely to develop or worsen if you:

- Slide down in a bed or chair
- Rub or create friction on the skin
- Cannot move or change positions
- Lose control of your bowel or bladder
- Don’t get enough nutrients or fluids
- Have poor circulation or fragile skin
- Have problems thinking clearly
- Have problems feeling pressure or pain

If You Have Problems With Bladder or Bowel Control

- Only use pads made for incontinence (ones that pull moisture away from your skin)
- Clean the skin gently with a pH-balanced soap or cleansing product
- Buy special cream or ointment to protect your skin from urine and stool. Ask your care team for suggestions
- Avoid wearing briefs or diapers for long periods if they are wet
Your Safety in the Hospital

How Can I Prevent Pressure Ulcers?

Limit pressure

- If you are in bed, change your position at least every one to two hours. You may need a special mattress or mattress overlay to lessen the pressure.
- If you are in a chair and can shift your own weight, do so every 15 minutes. If you cannot shift your own weight, your caregiver should change your position at least every hour. Spend time out of the chair several times daily. Ask your care team if you need a special cushion.
- Avoid lying directly on your hipbone when on your side.
- If you have pain on your heels or buttocks elevate your heels off the bed by placing a pillow under your calf.
- If you have pain on your heels or buttocks, tell your nurse. Pain may be the first signal of a bedsore beginning.

Eat nutritious foods

- If you are not very hungry, eat food high in protein first. Foods like dairy (milk, cottage cheese), meats (chicken, fish, beef), nuts, supplements (Ensure) are high in protein.
- If you have a pressure ulcer, eating more protein will help you heal.
- Ask to see a Dietician if you want more information.

Reduce friction

- Reduce friction when moving in bed, don’t pull or drag yourself across the sheets. Also, don’t push or pull with your heels. Your caregivers should use a turning sheet to help you change positions.
- Avoid repetitive movements. For example, don’t scratch your foot by rubbing it on the sheets.
- Keep the head of your bed as low as you can to protect your skin from sliding against the bed.

Use padding carefully

- Avoid doughnut-shaped cushions. These can hurt the tissues under your skin.
- Avoid using several layers (such as underpads, diapers and sheets) between you and your chair or bed.
- Use pillows to keep your knees and ankles from touching each other.

Protect your skin

- Have someone check your skin often. Tell your care provider if anything looks unusual.
- Clean your skin well after using a bedpan or soiling a diaper or pad.
- Use moisturizer to prevent dry skin. Bathe every other day.
- Don’t rub or massage the skin over the bony parts of your body.
Special Patient Services

Spiritual Care

Our chaplains and chaplain interns are here to provide you with support and comfort. There may be times when you would like to talk with someone who has a spiritual or religious background or with a chaplain or clergy from your own faith. Ask your nurse to contact Spiritual Care Services if you would like to meet with or pray with clergy, request religious literature or to arrange a blessing or baptism. You may also call (415) 353-1941 and leave a message. A chaplain is available around the clock.

A meditation room for quiet meditation or prayer is located in the lobby on the first floor of the hospital in the Moffitt wing near the Information Desk.

A worship service is held every Sunday at 11:30am in room M-1015 in the Moffitt wing of the hospital. Everyone is welcome to attend. The service is also televised on channel 24 on the patient room television. We also offer other televised resources. Channel 14 provides soothing sights and sounds. Channel 15 broadcasts messages, prayers, music and worship from many different faiths and traditions.

Volunteer Services

The Volunteer Services department provides a variety of services for our patients. Paperback books, magazines, craft supplies and movies are provided at no charge by calling (415) 353-1196 between 8am and 5pm, Monday through Friday. Newspapers are available at the newsstand price and can be delivered to patient rooms as requested.

Patient Mail

Volunteers will deliver mail to your room. To ensure prompt delivery, ask your family and friends to include your room number and the words “Patient Mail” on the lower right hand corner and to address the letters and cards to:

UCSF Medical Center
505 Parnassus Ave, Box 0208
San Francisco, CA 94143

Mail will be forwarded to your home address after you have been discharged.

Anyone can send a greeting to a hospital patient at UCSF Medical Center at Parnassus by accessing our website at: www.ucsfhealth.org/patientmail. Volunteers will deliver these emails to hospital patients within one business day, Monday through Friday.
Services for Visitors

Millberry Fitness Center

The Millberry Fitness Center, at 500 Parnassus Ave, is a state-of-the-art gym that is open to the public. The gym has weight machines, a game room and a pool, and offers classes and massages by appointments. For additional information about services and prices, call (415) 476-1115.

ATMs, Banking Services

ATMs are located in several places throughout the Parnassus campus, including

- Lower level of Millberry Union across the street from the main hospital building
- Outside the cafeteria on the second floor of the hospital
- Outside the medical building at 350 Parnassus Ave

Cafeteria and Vending Machines

The hospital cafeteria is located on the second floor of the Moffitt wing. It is open 6:45am to 11pm. Guests may pay with cash, credit card or debit card

The Courtyard Café is located in the School of Nursing Building. It is open Monday through Friday and offers sandwiches, salads, frozen yogurt, fresh baked goods and gourmet coffee, as well as a variety of Asian foods.

Vending machines and microwave ovens are located near the cafeteria and are available 24 hours a day. Other food services are located throughout the surrounding neighborhood, including 9th Ave and Irving St.

Millberry Union Food Court

A food court offering a variety of cuisines is located across the street from the hospital in Millberry Union at 500 Parnassus Ave. The food court is open Monday through Friday until 7pm with limited weekend and holiday hours. The selection includes Italian, Chinese, and Mexican foods, as well as salads, sandwiches and gourmet coffee. A convenience store is located next to the food court. In addition, there are coffee carts through the UCSF campus.

Gift Shop

The UCSF Medical Center is located in room M-191 on the first floor of the hospital, near the Information Desk. It offers a wide selection of gifts, including chocolates, fresh flowers and plants, magazines, books, toys, greeting cards and phone calling cards. The shop is open Monday through Friday. You may purchase a special gift for delivery to a hospital patient by calling (415) 353-1845, which will be delivered by a hospital volunteer.
Pain Management

Introduction

Many patients are concerned about pain that they will have after having knee replacement surgery. Please be reassured that UCSF Medical Center is committed to helping you manage your pain. Although we may not be able to eliminate all your pain, we will try to make it more manageable and to make you as comfortable as possible.

Pain can be managed while you are in the hospital by a variety of methods, including medications and alternative measures, such as relaxation techniques, music therapy, massage and hot and cold therapy. We will ask you about your pain upon admission and throughout your stay with us.

To manage your pain, we need your help. Tell us about your pain and let us know what does and does not seem to be working to lessen your discomfort. If you can be specific and offer details when describing your pain, this will help us to better treat your pain and understand what you are experiencing.

We will ask you to describe your pain using a 0 to 10 pain scale, with 0 being no pain, 1 being uncomfortable, and 10 being the worst pain you can imagine. With your help, working together, we can safely manage your pain and make you as comfortable as possible.
Pain Management

Advances in anesthetic techniques (nerve blocks and regional anesthesia, less emphasis on narcotics) and rehabilitation make it possible to perform joint replacement procedures with less pain and physiologic stress. Controlling and minimizing pain and nausea, as well as rapidly advancing motion, mobilization, and therapy enhances the success of the surgical procedure and the satisfaction of the patient. While we cannot make knee replacement surgery completely pain-free, your doctors and nurses are dedicated at minimizing your pain following surgery. It is important that the medicines work well enough to keep your pain level down to a manageable level so that you are able to perform the activities to aid in your recovery such as walking around and knee exercises. At UCSF, we have the following ways to help control pain after your knee replacement surgery.

Cold Therapy

Cold applied to your knee can significantly help decrease the pain and swelling in your knee that occurs as a result of your surgery. Your nurse will help you apply a cold pack to your knee during your hospitalization. It is recommended that you continue using a cold pack once you are home as well. Apply a cold pack at least twice a day for 20 minutes. Be sure to place a thin barrier, such as a towel or T-shirt, between your skin and the cold pack to prevent freezer burns. You may use ice in a bag (be sure to double bag to avoid leakage) or gel ice packs.

Multi Modal Pain Management

Most patients will use a combination of oral medications to help control their pain. The multimodal pain management medications include Acetaminophen (Tylenol), Celebrex and Gabapentin. Your surgical team will determine if the Multi Modal Pain medications are right for you. These non-narcotic medications produce less side effects such as nausea, vomiting and constipation. You may be given these medications orally prior to the start of surgery by your nurse and you will continue taking them for approximately 2 weeks after surgery. You will be given instructions how to take these medications upon discharge from the hospital. Sometimes insurance companies will not pay for your Celebrex after you are discharged from the hospital and may require a large copay for this discharge medication. If this is the case for your insurance, you have the option to pay out of pocket for this medication or to not pick up the prescription. It is your choice once you are discharged from the hospital.

Very few patients will require a PCA, or patient controlled analgesia machine, to control their pain. A PCA is a machine is connected to the patient via the IV. The patient can push a button to administer themselves a dose of IV pain medicine. PCAs can cause nausea and vomiting which can delay recovery and carry other risks such as respiratory depression. Some patients may need IV pain medicine such as Morphine or Dilaudid in addition to oral medications to control their pain.
After having been admitted to the hospital, you will go to the pre-operative area where you will be seen by an anesthesiologist. The most commonly used anesthesia is spinal anesthesia, which is administered to block sensation below the waist during surgery. Nearly all of our patients receive intravenous sedation along with spinal anesthesia. General anesthesia is the second most common type of anesthesia, which is to keep you in a "sleep" or unconscious state during surgery. At UCSF, we employ a multi-modal pain regimen to ensure your comfort during the perioperative period. As part of this regimen, your anesthesiologist may also discuss the option of a peripheral nerve block, which is placed preoperatively to provide postoperative pain relief. This nerve block catheter is infused with a local anesthetic to provide pain relief for a few days after surgery. Peripheral nerve block catheters have been shown to provide superior pain relief and can reduce the need for larger doses of pain medicine, which can cause a number of possible, undesirable side effects.

**Oral Opioid/Narcotic Pain Pills**

Once you are able to take medications and food by mouth, your pain may be treated with pain pills. It is important that you let your nurse know when the pain is coming back so that (s)he may get you another pain pill since pills take longer to work than the intravenous pain medication.

During your hospitalization, your doctor can change your pain pills if they are not effective enough or if they are causing intolerable side effects. It is difficult to change your pain pills once you are home as it requires a prescription to be mailed to you which can take up to one week.

Do not stop taking the narcotic pain pills abruptly to avoid experiencing withdrawal symptoms. You will be expected to wean off the narcotics after 1 to 2 months after surgery. You can wean off the narcotics by slowly increasing the time between each dose. Do not take pain pills with alcohol.

**Important Information Regarding Your Narcotic Pain Medicine:**

- The hospital will provide you with a prescription for your pain pills upon discharge.
- If you have a pain management specialist, please see them for refills on your pain medicine. Otherwise, your surgeon will provide you with refills up to 3 months after your surgery.
- Provide one week notice for refills on your pain medications.
- Narcotics are highly controlled substances. Do not lose your prescription or the pills. Early refills will not be provided. NO EXCEPTIONS WILL BE MADE.

**Oral Anti-Inflammatories/NSAIDs**

These kinds of non-opioid pain medications are helpful after surgery as they work to reduce surgical swelling and soreness. Certain examples include naproxen, Aleve, ibuprofen, Advil, aspirin, and Motrin. However, you must stop them 7 days before surgery, and cannot take them while taking Lovenox. You may resume these types of medications 24 hours after your last Lovenox injection, to avoid a medication interaction.
Physical Rehabilitation

Introduction

Physical therapy plays an integral role in the recovery process following your surgery. The emphasis is on ensuring your ability to be independent and safe in your daily functional activities and to regain the motion and strength of your operated knee. You will be able to take as much weight as you can tolerated on your operated leg, unless otherwise specified.

Be a Hero, Get up on Post Op Day Zero

Getting you up out of bed on the same day that you had surgery will be our goal. Our staff will assist you in getting out of bed. It is beneficial to you to get out of bed on your day of surgery to help decrease the risk of blood clots, increase your quality of life, and shorten the length of stay in the hospital. Getting up on Post op Day Zero includes marching in place near the bed, sitting out of bed for 15-30 minutes or walking 15-30 feet or more if you can.

Physical Therapy

You will begin to work with a physical therapist (PT) the first day after surgery. The physical therapist will teach you specific exercises to regain full knee movement. During your hospital stay, you will work with a physical therapist who will work with you to teach you how to get safely in/out of bed, chair, and car. The therapist will teach you to walk using a gait device. Your therapist will order you a walker to take home. The walker will be delivered to your hospital room. Please do not forget to take your walker home with you as the hospital cannot deliver it to you if you leave it behind.

There are two options for physical therapy after you leave the hospital:

Home Physical Therapy
If needed, after you return home, a nurse case manager in the hospital will arrange for a PT to see you at home 2 to 3 times a week. Your first visit will be within a couple of days after you come home. The home PT will see you until you are no longer home bound and you are strong enough to see an outpatient physical therapist. This can take anywhere from 1 to 4 weeks depending on how quick you progress. They can help you wean off the walker to a cane.

Outpatient Physical Therapy
Many patients start outpatient physical therapy a few days after they return home from the hospital. Others have in home PT then transition to outpatient for more aggressive therapy. You may go to any outpatient physical therapy location of your choice as long as they accept your insurance. Contact your surgeon’s office with the fax number to the physical therapy clinic you have chosen. We will fax your prescription to the clinic, and you can call to schedule your first post-operative visit. Be sure to tell them that you recently had hip replacement surgery. You will see an outpatient PT for 2 times per week for approximately 6 weeks. They can help you wean off your walker to a cane if you have not already done so.
An Occupational Therapist (OT) will address activities of daily living during your hospital stay. To be independent in performing activities of lower body self care skills, you may need to use adaptive equipment (long handled sponge, long handled shoehorn, sock aid, reacher, elastic shoelaces). The equipment will be ordered for you by your occupational therapist during your stay. Please do not forget to take your adaptive equipment home with you as the hospital cannot deliver it to you if you leave it behind. You may or may not have an occupation therapist come to your home after discharge depending on how you progress with your ability to be independent with self care activities.

Home Exercise Program

Your active participation in your rehabilitation can greatly affect the speed of your recovery. Your PT will provide you instructions for an independent home exercise program. You are expected to do these exercises at least twice a day when you are not being seen by a therapist. Walking is also highly encouraged as part of your daily activities. Below are examples of some exercises your PT will teach as part of your home exercise program.

Do 10 repetitions each, 3 to 4 times a day.
You should continue to exercise for several months after your operation.

Ankle Pumps/Circle
• Move your foot up and down.
• Move your foot in circles, in both directions.

Quad Sets
• Push the back of your knee into the bed. Make the muscle on the front of your thigh tight.
• Hold 10 seconds.
• Relax.
Physical Rehabilitation

Home Exercise Program (continued)

Do 10 repetitions each, 3 to 4 times a day.
You should continue to exercise for several months after your operation.

Gluteal Sets
- Squeeze your buttocks together.
- Hold 10 seconds.
- Relax.

Heel Slides
- Bend your knee slightly. Push your heel into the bed
  Feel the muscle on the back of your thigh tighten.
- Hold 10 seconds.
- Relax.

Short Arc Quads
- Place a towel roll under your knee.
- Raise heel off bed until knee is straight.
- Hold 10 seconds.
- Lower leg slowly.

Sitting Ankle Pumps
- Point foot up and down.

Sitting Knee Extension and Flexion
- Raise heel until knee is straight.
- Hold 10 seconds.
- Slowly lower your leg and bend knee as far as you can.
Physical Rehabilitation

Home Exercise Program (continued)

*Bridging the knee*

It is important to focus on bending AND straightening of the knee. The purpose of the bridging exercise is to straighten the knee. **DO NOT** place pillows under your operated knee. This can result in your knee healing in a permanently bent position. Bridging may be uncomfortable, but is necessary to ensure you knee can fully straighten.

- Place a small towel under the ankle.
- Rest in this position for at least 30 minutes twice a day and whenever you are in bed.
- Periodically push knee down into bed
### Rehab Goals for Patients with Total Knee Replacement

***These goals reflect the typical progression for a patient after a total knee replacement. Your personal progress and goals may vary.***

<table>
<thead>
<tr>
<th>Day after surgery</th>
<th>Exercises</th>
<th>Stand</th>
<th>Transfer to/from chair</th>
<th>Transfer to/from commode/toilet</th>
<th>Walk</th>
<th>Stairs</th>
<th>Assistive device for walking</th>
<th>Lower Body Dressing</th>
<th>Grooming &amp; Hygiene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn therapeutic exercises</td>
<td>Sit at edge of bed</td>
<td>With assist</td>
<td>With assist</td>
<td>With assist</td>
<td>May begin walking</td>
<td>with assist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 2</td>
<td>Perform exercises w/ supervision.</td>
<td>Independently</td>
<td>With walker or crutches supervised.</td>
<td>With assist, supervision or independently</td>
<td>In hallway with walker or crutches and assist or supervision.</td>
<td>May attempt stairs with crutches or handrails with assist.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 3</td>
<td>Independent with exercises</td>
<td>Independently.</td>
<td>Independently with walker or crutches</td>
<td>Independently.</td>
<td>Independently.</td>
<td>Stairs with crutches or handrails with assist, supervision or independently.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
- Independent with exercises: Patient can perform the activity without any assistance.
- Independently: Patient can perform the activity independently.
- Supervised or with assistance: Patient needs supervision or assistance to perform the activity.
- With assist: Patient needs assistance to perform the activity.
- Device needed: Patient needs a specific device to perform the activity.
The following goals should be reached to be discharged home

Am I ready to go Home?

☐ My pain is controlled by pain pills

☐ I can get out of bed by myself

☐ I am walking the minimum distance for my home setting (with walker/crutches)

☐ I can climb stairs (if there are stairs at home)

☐ I, or my helper, can inject my Lovenox shot

I am ready to go Home!
Risks of Surgery

Infection

Everyone needs to protect themselves from infections. Because you have a new joint, it is especially important for you to watch for signs of infection anywhere in your body. Infection may settle in an artificial joint and this can cause a major complication. Although this is a rare problem, it is important that you be aware of this possibility.

If at any time you should develop an infection anywhere in your body, you should have it treated immediately. This may include bladder infections, ingrown toe-nails, cuts, bites or anything on your skin that becomes reddened, tender or hot to touch.

If you have any procedures done, such as dental work for a tooth infection, surgery or other procedures that might introduce infection in your body, you may need to take prophylaxis antibiotics before the procedure. Good care of your incision can help lower your risk for an infection. See the next page for instructions for how to care for your incision.

**Signs of an infected knee include:**

- New fluid leaking from the incision
- Opening of the incision
- Flu-like symptoms

**PLEASE CALL YOUR SURGEON’S OFFICE IF YOU EXPERIENCE ANY OF THESE SYMPTOMS!**
Blood Clot

Blood clots in the leg veins are the most common complication of knee replacement surgery. These clots can become life threatening if they move to the brain, lungs or heart.

**Symptoms**

**PLEASE CALL YOUR SURGEON’S OFFICE IMMEDIATELY IF YOU EXPERIENCE ANY OF THESE SYMPTOMS!**

For blood clot in the leg – aka Deep Vein Thrombosis (DVT)

- New increased swelling of the operative leg
- Unexplained pain of the operative leg and pain medicine is not as effective as before

For blood clot in the lungs – aka Pulmonary Embolism (PE)

- Unexplained shortness of breath
- You are suddenly very sweaty
- Your heart rate is increased
- Chest pain

**Preventing Blood Clots**

- **Be Active!**
  Walking promotes blood circulation which helps to decrease your risk for getting a blood clot. During the day time be sure to get up every 2 to 3 hours and walk across the room.

- **Compression Stockings, TED hose**
  Compression stockings are not longer used in the hospital, however, you may use them at home if it is your preference. Thigh-high stockings are also helpful for decreasing the normal surgical swelling that occurs after having knee replacement surgery. They can be purchased at a medical store.

- **Avoid flying for 6 weeks after the date of your surgery**
  The high altitude and sitting for a long period of time places you at a higher risk for getting a blood clot.

- **Finish taking Lovenox (enoxaparin) at home after surgery**
  At the preoperative class you will be given a prescription for Lovenox (aka enoxaparin), which is a blood thinner injection you are required to take after surgery. It is a medication that will thin your blood and make it less likely for you to develop a blood clot. It is available only as an injection. The injection is a very small needle that goes into the fat tissue of your abdomen (stomach).

  You will start taking Lovenox the day after your surgery and continue it for 10 more days once you are home. The nurses in the hospital will train you how to give yourself the injection. We can also train a caregiver to give you the injection as well. Once you have picked up Lovenox, leave it at home and keep the medication at room temperature.
Your incision is closed with staples or sutures, which will be removed around 10 to 14 days after your surgery. This area will be bruised for a while and may itch, pull or feel numb. You also may experience a burning sensation, which can be relieved by using an icepack for 10 to 15 minutes. Avoid using creams, lotions or ointments on the knee area while the sutures or staples are in. Do not clean the incision with any substance (ie hydrogen peroxide, alcohol, etc). Do not apply antibiotic ointment or creams to the incision.

A special dressing referred to as Mepilex will be applied to your incision at discharge, and should remain in place for 5 days. It is okay to see drainage at the top of the dressing. The dressing works by absorbing any drainage and pulling it away from the skin to keep the incision clean and dry. However if the dressing appears completely saturated, please contact office for instructions. After 5 days you may remove the Mepilex dressing and begin dressing your incision daily with sterile gauze and medical tape until suture or staple removal. While changing your dressing look for signs of infection. Please buy the gauze and medical tape at any pharmacy before the date of your surgery to have the necessary supplies once you are home. Have your caregiver help if you are unable to care for your incision. We recommend buying 4x4 gauze and paper tape.

Staples or sutures may be removed by:
• Your home physical therapist – your therapist can contact your surgeon’s office for an order.
• Your local primary care provider – no order is required.
• Your surgeon’s nurse.
Steristrips, or butterfly strips, will be placed after the removal of your staples or sutures. Steristrips should remain on until they fall off by themselves or remove after 5 days.

The incision must be kept dry while the staples or sutures are in. You may sponge bathe or cover your incision with waterproof bandage for showering. You may shower as usual 24 hours after the staples or sutures are removed. You may soak in a bath tub or pool 2 weeks after the staples or sutures are removed.

You may apply creams, lotions or ointments on the knee once the staples or sutures are removed and there are no openings of your incision. The following tips can help decrease the scar of your incision:
• Manually massage out the scar tissue – your physical therapist can show you how
• Apply Vitamin E
• Avoid exposure to the sun for one year as the sun will make the scar more prominent

**Signs of an infected knee include:**

• New fluid leaking from the incision
• Opening of the incision
• Flu-like symptoms, including chills and fever greater than 101.5°F

**PLEASE CALL YOUR SURGEON’S OFFICE IF YOU EXPERIENCE ANY OF THESE SYMPTOMS!**
Your Recovery at Home

Constipation

Constipation is a common problem following surgery. This is usually due to your limited activity and the side effect of the narcotic pain medicine and iron supplements you may be taking. Below are recommendations on how to manage the constipation:

• Continue taking stool softeners at home while you are on the narcotic pain medicine. You will be provided with a prescription for stool softeners upon discharge from the hospital. Stool Softeners may also be purchased over-the-counter.
• Decrease your use of narcotic pain pills as your pain allows
• Drink 6 to 8 glass of water a day
• Drink prune juice or eat prunes daily
• Walk regularly
• Avoid straining while having a bowel movement as this can cause you to faint
• Increase your fiber intake by eating whole wheat bread, bran cereals, fresh fruits and vegetables

Your bowel movements may be irregular at first, but they will gradually return to normal. You should have a bowel movement at least once every 3 days. If you go more than 3 days without having a bowel movement, try an over-the-counter laxative such as Milk of Magnesia, Fleets enema, or Dulcolax. Call your primary care provider if you are still unable to have a bowel movement after trying laxatives.

When You Can Drive Again

You may drive again once you meet ALL of the following criteria:
• You have completely stopped taking all narcotic pain medicine.
• Regardless of which knee was operated on, you feel the pain is at a tolerable level that will allow you to hit the brakes in case of an emergency.

When you have met all of the above criteria, it is recommended that you start with a test drive to make sure you feel safe driving. Gradually increase the distance you drive as you feel comfortable.
Your Recovery at Home

Normal Expectations

Recovering from a total knee replacement varies from person to person. Factors that contribute to the difference includes the person’s weight, medical history, psychological health, physical fitness, personal motivation and coping skills. You will notice gradual improvements in the level of pain, swelling and your physical mobility for many weeks after your surgery. You will see the most rapid improvements within the first 3 months after surgery. However, improvements can still be seen up to a year after surgery. Below are some normal changes of your body that may occur while you are healing from your surgery.

Swelling

The blood circulation of your operated leg is sluggish after surgery. This can cause fluid to pool in your leg and make your entire operated leg swollen. The swelling can even occur in the ankles and foot. As your ability to walk improves, your blood circulation will also improve. Gradually you should notice an decrease in the swelling over 6 to 8 weeks. However, any swelling that comes with significant changes in your level of pain should be reported to your surgeon’s office as you could be experiencing a blood clot.

The following are some suggestions on how you can minimize the swelling of your operated leg:
• Walk frequently to promote blood circulation
• Wear thigh-high compression stockings or TED hoses. They can be purchased at a medical store.
• Keep your operated leg above your heart as much as you can tolerated when you are sitting or laying in bed.
• Apply a cold pack at least twice a day for 20 minutes. Be sure to place a thin barrier, such as a towel or T-shirt, between your skin and the cold pack to prevent freezer burns. You may use ice in a bag (be sure to double bag to avoid leakage) or gel ice packs.

Limping

It is normal to have a limp for up to 3 months after surgery. It is important to practice walking on your own to correct your limp. Do not wear any shoe lifts for the first 3 months after surgery. This will allow your body to get used to your new knee and help you to learn how to walk without a limp.

Sleeping

It is common to have difficulty sleeping for the first few months after surgery. You may find it difficult to sleep in your usual favorite sleeping position and that you wake up frequently during the night due to the pain or to take pain medicine. You will return to your normal sleeping patterns as the pain improves. We do not recommend sleeping pills once you are home as they can cause dependency. Please speak to your primary care provider if you feel you need a sleeping pill. For better sleep:
• Avoid daytime naps
• Establish routine hours for bedtime and waking up in the morning
• Avoid caffeine, and drinking fluids at least 3 hours before bedtime. Avoid alcohol.
### Post-operative Instruction Timetable
Below is a timeline summary for important milestones after surgery

<table>
<thead>
<tr>
<th>Treatment or Instructions</th>
<th>Purpose or Reason</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lovenox Injections</td>
<td>Lovenox is a blood thinner used to prevent the risk of blood clots after surgery.</td>
<td>Continued at home or rehab for 10 more days after leaving UCSF hospital.</td>
</tr>
<tr>
<td>Anti-Inflammatory Medication</td>
<td>Decrease inflammation in the operated joint. (ex. Naproxen or Aleve, Ibuprofen or Advil)</td>
<td>You may begin using anti-inflammatory medications 24 hours after your last Lovenox injection.</td>
</tr>
<tr>
<td>Vitamins &amp; other medications stopped before surgery</td>
<td>We may have asked you to stop taking some of your medications in preparation for your surgery.</td>
<td>You may restart medications we asked you to stop taking before surgery 24 hours after your last Lovenox injection.</td>
</tr>
<tr>
<td>Narcotic Pain Medication</td>
<td>Pain relief. (ex. Norco, Vicodin, Percocet)</td>
<td>You may use for up to 4 to 6 weeks after surgery.</td>
</tr>
<tr>
<td>Icing the Surgery Site</td>
<td>Pain relief and decreasing inflammation.</td>
<td>Ice your surgery site for 20 minutes 2 to 3 times a day. Use towel between the ice and your skin.</td>
</tr>
<tr>
<td>Outpatient Physical Therapy</td>
<td>Improve walking, strength, flexibility and stamina.</td>
<td>2 times per week for 6 weeks.</td>
</tr>
<tr>
<td>Avoiding Flying</td>
<td>Flying increases the risk of blood clots post surgery.</td>
<td>Avoid flying for 6 weeks after surgery.</td>
</tr>
<tr>
<td>Return to Driving</td>
<td>Prevent car accidents.</td>
<td>You may return to driving once cleared by your surgeon, you are off the narcotic pain medications, and pain is at tolerable level to safely brake the car.</td>
</tr>
<tr>
<td>No Dental Work</td>
<td>Preventing the risk of infection.</td>
<td>No dental work 4 weeks before surgery and 6 weeks after surgery. (AAOS) no longer recommends prophylactic antibiotics for patients with prosthetic joints undergoing dental procedures, but diagnosed infections should be treated immediately.</td>
</tr>
<tr>
<td>Antibiotic Prophylaxis</td>
<td>Preventing the risk of infection. (Ask for prescription at your post-operative visit)</td>
<td></td>
</tr>
</tbody>
</table>
# ARTHROPLASTY CONTACT INFORMATION

For life-threatening emergencies please dial 911 or go to the nearest emergency room

<table>
<thead>
<tr>
<th>Main Line for appointments and and after-hours physician on call line (for weekends &amp; holidays)</th>
<th>Call if you have concerns that cannot wait until the next business day for on call physician. Normal Clinic Hours are Mon–Fri 8am-5pm. We are closed on holidays</th>
<th>(415) 353-2808</th>
</tr>
</thead>
</table>

## Practice Assistances

<table>
<thead>
<tr>
<th><strong>Dr. Kevin Bozic</strong></th>
<th><strong>Call if you have questions related to:</strong></th>
<th>(415) 353-2663</th>
</tr>
</thead>
</table>
| Diana Iturbarria | • pre- & post-operative surgery appointments  
• surgery date & Prepare/Anesthesiology visit | |

<table>
<thead>
<tr>
<th><strong>Dr. Thomas Vail</strong></th>
<th><strong>Call if you have questions related to:</strong></th>
<th>(415) 353-2509</th>
</tr>
</thead>
</table>
| Maria Arellano | • pre- & post-operative surgery appointments  
• surgery date & Prepare/Anesthesiology visit | |

<table>
<thead>
<tr>
<th><strong>Dr. Michael Ries &amp; Dr. Hansen</strong></th>
<th><strong>Call if you have questions related to:</strong></th>
<th>(415) 353-2508</th>
</tr>
</thead>
</table>
| Maria Delgado | • pre- & post-operative surgery appointments  
• surgery date & Prepare/Anesthesiology visit | |

## Mid-Level Practitioners

<table>
<thead>
<tr>
<th><strong>Carlotta Cavazos, PA-C</strong></th>
<th><strong>Call if you have medical questions related to:</strong></th>
<th>(415) 353-2888</th>
</tr>
</thead>
</table>
| (Dr. Thomas Vail) | • pre- & post-operative surgical preparations  
• outpatient physical therapy  
• medications, including pre-dental antibiotics  
• medication refills  
• medical concerns about your hip or knee | carlotta.cavazos@ucsfmedctr.org |

<table>
<thead>
<tr>
<th><strong>Lisa Hartmayer, RN, NP</strong></th>
<th><strong>Call if you have medical questions related to:</strong></th>
<th>(415) 353-4979</th>
</tr>
</thead>
</table>
| (Dr. Kevin Bozic) | • pre- & post-operative surgical preparations  
• outpatient physical therapy  
• medications, including pre-dental antibiotics  
• medication refills  
• medical concerns about your hip or knee | lisa.hartmayer@ucsfmedctr.org |

<table>
<thead>
<tr>
<th><strong>Angela Passanisi Clifford, PA-C</strong></th>
<th><strong>Call if you have medical questions related to:</strong></th>
<th>(415) 514-8437</th>
</tr>
</thead>
</table>
| (Dr. Erik Hansen) | • pre- & post-operative surgical preparations  
• outpatient physical therapy  
• medications, including pre-dental antibiotics  
• medication refills  
• medical concerns about your hip or knee | Angela.Clifford@ucsfmedctr.org |

<table>
<thead>
<tr>
<th><strong>12 Long Nurses Station</strong></th>
<th><strong>UCSF Medical Center Orthopaedic Floor</strong></th>
<th>(415) 353-1387</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Kathryn Curcione, RN</strong></th>
<th><strong>Call if you have questions related to your hospitalization on 12 Long</strong></th>
<th>(415) 353-8214</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 Long Patient Care Manager</td>
<td></td>
<td><a href="mailto:kathryn.curcione@ucsfmedctr.org">kathryn.curcione@ucsfmedctr.org</a></td>
</tr>
</tbody>
</table>

## Medical Records

<table>
<thead>
<tr>
<th><strong>Medical Records</strong></th>
<th><strong>To request a copy of your medical records</strong> (except x-rays)</th>
<th>(415) 353-2221</th>
</tr>
</thead>
</table>

**To request a copy of your x-rays**

- Call the Film Library at (415) 353-1640
- You can also request a copy of your x-rays in person at 1500 Owens St., 2nd floor lobby, San Francisco, CA 94158

## For questions related to your insurance & coverage

Call your insurance company for specific coverage information or access the following UCSF link: [http://www.ucsfhealth.org/adult/patient_guide/health_insurance.html](http://www.ucsfhealth.org/adult/patient_guide/health_insurance.html)

## For questions related to a statement or bill you have received

- for hospital bill: (415) 673-1113
- for provider bill: (415) 353-3333
- you can also call the phone number on your statement/bill or access the following UCSF link: [http://www.ucsfhealth.org/adult/patient_guide/billing.html](http://www.ucsfhealth.org/adult/patient_guide/billing.html)
Map to 505 Parnassus Ave.

You may also call (415) 476-2999 for telephone directions in several languages. Maps are also available online: http://pathway.ucsfmedicalcenter.org

Driving Directions to Parnassus Heights

From the East Bay and Oakland Airport
1. Cross Bay Bridge (I-80 West), stay in 2nd lane from right
2. Exit right on 101 North/Golden Gate Bridge
3. Get in left lane and exit to Octavia Blvd. / Fell St.
4. Turn left on Fell St.
5. From far right lane, turn left on Stanyan St.
6. Turn right on Carl St., which becomes Irving St.
7. Turn left into UCSF Parking Garage on Irving St.

From Marin County (Highway 101 South and 1 South)
1. Cross Golden Gate Bridge, stay in far right lane
2. Exit 19th Ave./Golden Gate Park onto CA-1 South
3. Go through Golden Gate Park, where Park Presidio Dr. becomes 19th Ave.
4. Turn right on Judah St.
5. Turn right on 20th Ave.
6. Turn right on Irving St.
7. Turn right into UCSF Parking Garage on Irving St.

From San Francisco Airport and South Bay (Highway 101 North)
1. Approaching San Francisco, stay left
2. Exit left on 101 North / Golden Gate Bridge
3. From left lane, exit to Octavia Blvd. / Fell St.
4. Turn left on Fell St.
5. From far right lane, turn left on Stanyan St.
6. Turn right on Carl St., which becomes Irving St.
7. Turn left into UCSF Parking Garage on Irving St.

From the Peninsula (I-280 North)
1. Approaching San Francisco, stay left
2. Exit CA-1 North toward 19th Ave. / Golden Gate Bridge
3. Stay in the left lanes for 19th Ave.
4. Turn right on Irving St.
5. Turn right into UCSF Parking Garage on Irving St.

For customized maps and information visit: pathway.ucsfmedicalcenter.org
Street parking at Parnassus Ave is very limited. Public parking is located across the street from the main hospital building. Other public lots are available with shuttle service to 505 Parnassus Ave:

- Fifth Ave and Kirkham St
- Stanyan St. and Kezar Way, near Kezar Stadium

Parking fees vary at each facility. For further information, call the Parking Office at (415) 476-2566. Anyone can request an escort to their car at the security desk located at the Emergency Department entrance.

UCSF Medical Center at Parnassus is directly accessible via Muni buses lines:

- 6 Parnassus
- 43 Masonic
- N Judah

For more information regarding public bus transportation, call San Francisco Muni at (415) 673-6864.

Direct telephones for taxi service are located in the phone room in the hospital main lobby. The Information Desk staff can also assist with taxi and other transportation questions.
Map/Directions to 1500 Owens St.

You may also call (415) 476-2999 for telephone directions in several languages.
Maps are also available online: http://pathway.ucsfmedicalcenter.org/
Parking

Street parking at Owens St. is very limited. Public parking is available at the rear of our building. Pay in advance at the pay station.

Public Transportation

The Orthopaedic Institute is directly accessible via Muni buses lines:

- Muni T-line
- 22 Fillmore
- 48 Quintara

UCSF shuttles stops at 3rd St. & Gene Friend Lane and Mission Bay Community Circle. For further information regarding the shuttles, call the Parking Office at (415) 476-2566.

For patients requiring mobility assistance who utilize public transportation or the UCSF shuttle system, you may call (415) 514-6368 five minutes before arriving for a cart ride to the Orthopaedic Institute. The cart can pick you up at the following locations:

- Hearst Tower across from the T-line
- 4th St. UCSF shuttle stop
- Mission Bay Community Center