

# Total Knee Replacement

The Joint Institute at  
Saint Barnabas Medical Center



**Saint Barnabas  
Medical Center**

**RWJBarnabas  
HEALTH**

Let's be healthy together.

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## Saint Barnabas Medical Center

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# Welcome

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Welcome to the Joint Institute. The Joint Institute was designed to empower our patients and their family members on their path to a quick recovery and optimal outcome after Joint Replacement Surgery. We are honored that you have chosen our physicians and our program to facilitate your treatment plan.

Annually, over 900,000 people undergo total joint replacement surgery. Primary candidates are individuals with chronic joint pain from arthritis that interferes with daily activities, walking, exercise, leisure, recreation, and work. The surgery aims to relieve pain, restore your independence, and return you to work and other daily activities.

Total Knee Replacement patients typically recover quickly. Patients will be assisted to start ambulating the day of surgery. The Joint Institute has implemented a comprehensive planned course of treatment. We believe that you play a key role in promoting a successful recovery. Our goal is to involve you in your treatment through each step of the program. This guide will give you the necessary information to promote a more successful surgical outcome.

The physicians, nurses, rehabilitation staff, and administration of Saint Barnabas Medical Center have worked together to assemble a multi-disciplinary team of specialists to create the Joint Institute. The Joint Institute is more than a specialized surgical program within Saint Barnabas Medical Center; it is also a comprehensive patient-centered care model for the surgical treatment of ailments. What separates the Joint Institute from other programs is how we prepare and guide our patients and their families through the entire process of treatment from:

- ▶ Preparation for surgery
- ▶ Specialized post-operative care
- ▶ Preparation for after medical center care/ discharge

We know for most patients that coming to the medical center for surgery can be an anxiety ridden process. The Joint Institute is designed to address each patient's fear and concerns about his/her surgical treatment and empowers each patient with information and support in order to have the best possible outcome.

Thank you again for choosing the Joint Institute ---at Saint Barnabas Medical Center. It is our hope to deliver the best care for our patients and their family members during all phases of treatment for your knee surgery. Our goal is to support you and your family through your treatment so that you can recover quickly and get back to the activities that you love.

# Preoperative Care

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## Schedule Preadmission Testing

All patients who undergo surgery must go through a series of tests that determine a patient's readiness for surgery from a medical standpoint. You will be scheduled for these tests by your surgeon or his/her office staff. The basic set of preadmission tests includes:

- ▶ Fasting blood work (2 hour fast)
- ▶ Electrocardiogram (EKG)
- ▶ Chest X-ray (if indicated)
- ▶ Anesthesia Consult
- ▶ MRSA/MSSA Nasal Screening

Your surgeon or primary care physician may require further testing due to any chronic medical conditions that you currently have. Please check with your surgeon or your primary care physician if you need further preadmission testing.

Preadmission testing will be completed at Saint Barnabas Medical Center's Preadmission Testing Area in the Short Stay Unit on the 1st floor. Appointments are available every Monday, from the hours 7:15am-2:15pm. Please bring any prescriptions that were given to you by your surgeon or primary care physician and give them to the staff in Preadmission Testing upon your arrival. You can reach the Preadmission Testing Coordinator at 973.322.8884 to schedule an appointment or with any questions.

\*Your preadmission testing should be completed within 30 days of your surgery date. Any testing that is completed greater than 30 days of your surgery cannot be accepted.

MRSA and MSSA is a bacteria that can be found on an individual's skin or in their nostrils. Although it is not very harmful living outside the body, it is important if a patient tests positive for MRSA or MSSA, we treat the bacteria prior to surgery. Killing this bacteria will help decrease the chances of infection after surgery. Your surgeon or primary care physician may require further testing due to any chronic medical conditions that you currently have. Please check with your surgeon or your primary care physician if you need further preadmission testing.

## Attend the Preoperative Education Seminar

Prior to your surgery you will be contacted by the Joint Coordinator about attending The Preoperative Education Seminar. This seminar is held every Monday morning at Saint Barnabas Medical Center and is a comprehensive program designed to prepare you for your surgery. Many topics will be discussed at the seminar which includes:

- ▶ How to prepare for your surgery and medical center stay
- ▶ Medication Information and Instructions
- ▶ What to expect on the day of surgery
- ▶ What to expect during you medical center stay
- ▶ How to prepare for discharge from the medical center

Many of the staff members that you will be working with after your surgery will be present at the seminar. They will not only share information with you but also answer any questions that you may have. It is our goal to schedule your preadmission testing on the same day as the seminar for your convenience.

**The Joint Institute  
Preoperative Education Seminar  
Monday Morning, 9:30am  
Saint Barnabas Medical Center  
Joint Replacement Gym Room 2717  
Second Floor**

It has been proven in medical literature that a prepared and educated surgical patient has a better outcome then one without any preparation. We have found this to be true in our own experience, and even though the Preoperative Education Seminar is not mandatory, you are strongly urged to attend. There will be refreshments served since you will be fasting for 2 hours prior to the blood work that is a part of preadmission testing (if your testing is prior to the class). We encourage you to bring a family member or friend along to the seminar.

*Please call Joint Coordinator to register for the next available seminar:*

**Luciana C Mullman, 973.322.9908.**

## Preparing Your Home:

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Preparing your home before surgery enables a much smoother transition from hospital to home and makes for an easier and safer recovery. A well-prepared home causes less work for your family members or caretakers once it's time to arrive home after you leave the hospital. If you have a low toilet, you may want to consider purchasing a toilet seat riser from your local pharmacy or medical supply store. Also consider purchasing a shower chair to assist with bathing. (In some cases insurance will cover this equipment)

### Arrange for help

- ▶ You will not be able to drive for at least two weeks or more after your knee surgery, which will be discussed prior to leaving the hospital. Arrange to have someone drive you for at least two weeks after your surgery.
- ▶ Consider asking a friend or family member to purchase groceries, help with laundry and other household chores, run errands and drive you to your follow-up doctor appointments.

### Organize your home

- ▶ While you are in the kitchen (and in other rooms as well), place items you use regularly at arm level so you do not have to reach up or bend down.
- ▶ Set up a “recovery center” where you will spend most of your time. Things like the phone, television remote control, radio, facial tissues, wastebasket, pitcher and glass, reading materials and medications should all be within reach.

### Potential fall hazards

- ▶ Remove throw rugs from walkways in your path. They can be a trip threat during your recovery.
- ▶ Identify and remove any trip hazards, such as electrical cords, clutter or other obstacles in your home. Pets may also increase your risk of falls, and it is helpful to have someone watch your pets during recovery or make reservations at a local kennel

## Preoperative Exercises, Goals, and Activity Guidelines

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### Exercising Before Surgery:

It is important to be as fit as possible before undergoing a total knee replacement. Always consult your physical therapist or physician before starting a preoperative exercise plan. This will make your recovery much faster. Eleven exercises are shown here that your physical therapist or physician may instruct you to start doing now and continue until your surgery. You should be able to do them in 15–20 minutes and it is typically recommended that you do all of them twice a day. Consider this a minimum amount of exercise prior to your surgery. Also, remember that you need to strengthen your entire body, not just your leg. It is very important that you strengthen your arms by doing chair push-ups (exercise #8) because you will be relying on your arms to help you get in and out of bed, in and out of a chair, walk, and to do your exercises postoperatively.

Stop doing any exercise that is too painful.

## Preoperative Exercises

(See the following pages for descriptions:)

- 1 Ankle pumps 20 reps.  
2 times/day
- 2 Quad sets (knee push-downs) 20 reps.  
2 times/day
- 3 Gluteal sets (bottom squeezes) 20 reps.  
2 times/day
- 4 Abduction and adduction (slide heel out and in) 20 reps.  
2 times/day
- 5 Heel-slides (slide heel up and down) 20 reps.  
2 times/day
- 6 Short arc quads 20 reps.  
2 times/day
- 7 Long arc quads 20 reps.  
2 times/day
- 8 Armchair push-ups 20 reps.  
2 times/day
- 9 Seated hamstring stretch 5 reps.  
2 times/day
- 10 Straight leg raises 20 reps.  
2 times/day
- 11 Knee extension stretch 20 minutes.  
2 times/day

## Range of Motion and Strengthening Exercises

### 1 Ankle Pumps

Flex foot. Point Toes.

Repeat 20 times.



### 2 Quad Sets

Lie on back, press knee into mat, tightening muscles on front of thigh. Do NOT hold breath.

Repeat 20 times.



### 3 Gluteal Sets

Squeeze buttocks together. Do NOT hold breath.  
Repeat 20 times.



### 4 Hip Abduction and Adduction

(Slide Heels Out and In)

Lie on back, slide leg out to side. Keep toes pointed up and knees straight. Bring leg back to starting point. Perform one leg at a time.

Repeat 20 times.



### 5 Heel Slides

(Slide Heels Up and Down)

Lie on couch or bed. Slide heel toward your bottom.

Repeat 20 times.



### 6 Short Arc Quads

Lie on back, place towel roll under knee. Lift foot, straightening knee. Do not raise thigh off roll.

Repeat 20 times.



### 7 Knee Extension — Long Arc Quads

Sit with back against chair. Straighten knee. Repeat 20 times.



### 8 Armchair Push-Ups

This exercise will help strengthen your arms for walking with crutches or a walker. Sit in an armchair. Place hands on armrests. Straighten arms, raising bottom up off chair seat if possible. Feet should be flat on floor. Repeat 20 times.

### 9 Seated Hamstring Stretch

Sit on couch or bed with leg extended. Lean forward and pull ankle up. Keep back of knee flat on table. Stretch until pull is felt. Hold for 20 – 30 seconds. Keep back straight. Relax. Repeat 5 times.

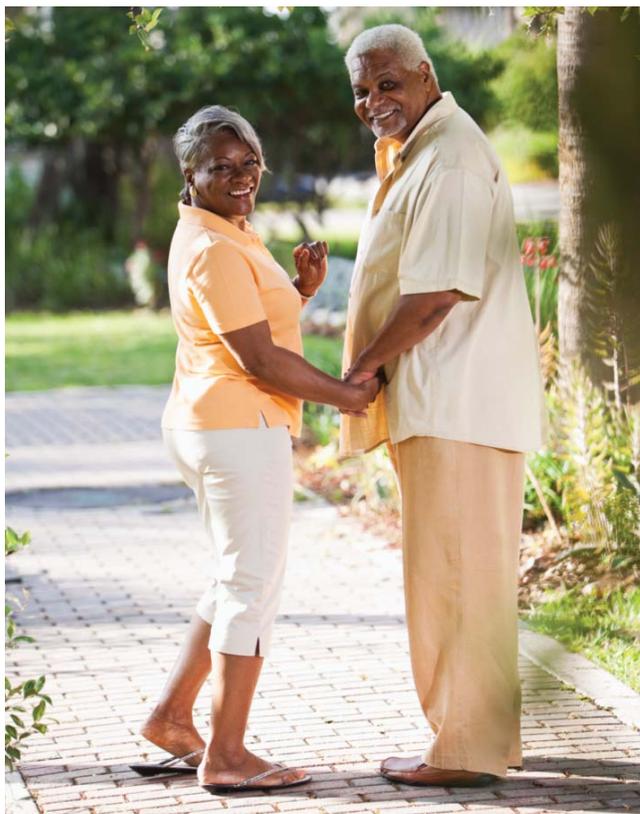
### 10 Straight Leg Raises

Lie on back, unaffected knee bent, and foot flat. Lift opposite leg up 12 inches. Keep knee straight and toes pointed up. Relax. Repeat 20 times.



### 11 Knee Extension Stretch

Prop foot of operated leg up on chair. Place towel roll under ankle and ice pack over knee. Put 5–10 lbs. of weight on top of knee (a 5–10 lb. bag of rice works well). Do for 20 minutes. (Perform this exercise, only if your knee does NOT fully straighten)



## Week Prior Surgery

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### Stop Medications That Increase Bleeding

Seven days prior to surgery, stop all aspirin and anti-inflammatory such as; Motrin®, Naproxen, Aleve. Advil ext. Please stop al herbal supplements 2-3 weeks prior to surgery such as Vitamin E, Fish Oil, Ginseng, Ginger ect.

These medications may cause increased bleeding. **To a review a more detailed list of herbal supplements and policies, reference page 20 in the Appendix.** If you are taking a blood thinner, you will need special instructions for stopping the medication. Your surgeon will instruct you about what to do with your other medications.

### When will I find out what time to report for surgery?

On the day before you are scheduled for surgery, you will receive a call from the Same Day Surgery Center. Calls will begin at 9am and will continue until 9pm Monday through Friday. If your surgery is scheduled on a Monday you could receive a call on Friday. During this call, the Same Day Surgery staff member will give you the time of your surgery as well as the time to report to Saint Barnabas Medical Center so that the staff can prepare you for surgery.

All calls will be made to your home phone number. On the occasion that you can only be reached at an alternate number, please inform the Joint Coordinator of the alternative number. If you are not at home when the staff member calls, they will leave a message. The number to call them back for your time of surgery is 973.322.5130. Please do not call the Same Day Surgery Center prior to the day before your surgery regarding your time for surgery as the staff will not have accurate information until 9am on the day before your surgery.

## Night Before Surgery

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It is important the night before surgery that you eat a healthy balanced meal, unless otherwise directed by your physician. Full solid meal can be eaten 8 hours prior surgery and a light meal (contains no fat) 6 hours prior to surgery. Clear liquids, up to 12 ounces, are permitted 2 hour prior to arrival at hospital.

**For more detailed information please reference PREOPERATIVE EATING AND DRINKING GUIDELINES on page 19 in the Appendix.**

You will also be asked to begin prepping your skin the night before surgery. Studies have shown that cleansing your skin with a preoperative body wash reduces your chance of surgical site infection. The Joint Coordinator will give you a supply of the body wash as well as review the process on how to prep your skin in The Preoperative Education Seminar.

## Pre-Surgery Chlorhexidine Shower Instructions

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We strive to prevent infections and want you to get involved and play an active role in your health. We need to be sure that your skin is as free of germs as possible before your day of surgery and hospital stay. You can reduce the number of germs on your skin and decrease the risk of a surgical site infection by preparing your skin with a special soap called chlorhexidine gluconate (CHG). If you are allergic, please use antibacterial soap instead, such as Dial. Please follow the instructions below:

1. Shower with CHG the night before your surgery AND the morning of your surgery. Do not shave the area of your body where your surgery will be performed.
2. With each shower or bath, wash your hair as usual with your normal shampoo.
3. Rinse your hair and body thoroughly after you shampoo your hair.



4. Turn water off and apply the CHG soap to your entire body from the neck down, paying special attention to the area where your surgery will be performed.
5. Apply and rub CHG to your body gently for (5) minutes, paying special attention to the area where your surgery will be performed. Do not scrub your skin too hard. Do not wash your body with your regular soap after CHG is used.
6. Do not use CHG on your face near your mouth, eyes or ears or in the genital area.
7. Turn the water back on and rinse your body thoroughly.
8. Pat yourself dry with a clean, soft towel. Do not apply any lotion, powder, deodorant, perfume, make up or hair products. Remove all jewelry and body piercings.

Stop using the CHG soap and call your doctor if you have a skin reaction or any other irritation.

*For questions, call The Joint Coordinator 973.322.9908.*

## **Morning of Surgery**

The morning of surgery you will again preform the CHG body wash cleanse as instructed above. Also wear freshly laundered clothes after prepping your skin. Wearing soiled clothes from the day before will contaminate your skin. You can wear nail polish on your finger nails and toe nails if you wish, but please remove any nail tips.

It is important that you check with your primary care physician as to which medications you can take the day of surgery. If there are medications that your primary care physician would like you to take the day of surgery, you can take them with clear liquids.

Please remember that you can drink clear liquids up to 2 hours before your procedure. Clear liquids include:

- ▶ Water
- ▶ Fruit juices without pulp
- ▶ Carbonated beverages
- ▶ Clear tea
- ▶ Black coffee

It is important to stay hydrated before your surgery as it will quicken your return to normal function after surgery.

### **Please bring the following to the medical center:**

- ▶ Your Guidebook
- ▶ A copy of your Living Will or Advanced Directives
- ▶ Your driver's license, insurance card, prescription drug plan card, and any copayment required by your particular insurance plan
- ▶ Loose fitting clothing (enough for 2 days)
- ▶ Personal Toiletries
- ▶ Comfortable pair of walking shoes
- ▶ A list of Medications and the dose you take at home (you do not need to bring in the actual medication)
- ▶ Medical equipment such as an inhaler, hearing aid, CPAP/ BiPAP (masks only). If you have an internal medical device such as a pacemaker or AICD, please bring the medical device identification card.

### **Do not bring**

- ▶ Medications, unless directed to do so by your doctor
- ▶ Large sums of cash, jewelry or other valuables



# Medical Center Care

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## Arriving to the Medical Center

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Please arrive to the medical center at the time specified by the Same Day Surgery Center staff. In most cases you will be asked to arrive to the medical center two hours before your scheduled surgery. Please arrive on time for your surgery. If you do not report on time, your surgery can be delayed or in some cases postponed.

When arriving to the medical center, please park in the medical center's Visitor Parking. For your convenience, your family member could drop you off at the main entrance to the medical center and then park the car in Visitor Parking. Please do not forget to take the ticket from the ticket machine inside the medical center. You will be asked to pay for your parking at a payment machine next to Security before you exit the medical center on the way out to your car. If you forget your ticket, you will be required to retrieve it from your car and pay for parking before you exit the medical center. If your ticket is lost or stolen arrangements for payment can be made at the Security window adjacent to the Information Desk at the main entrance of the medical center.

Once you are at the main entrance to the medical center, you can precede to the Information Desk. Please let a staff member know that you are at the medical center for surgery and the staff member will direct you to the main elevators. Take the main elevator up to the first floor. Once on the first floor, you will see a large waiting area with a sign above that reads Short Stay Unit. Please report to the registration desk in the Short Stay Unit.



## Short Stay Unit

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When you arrive at the registration desk in the Short Stay Unit, you will be greeted by a staff member and asked to complete registration information. Please have your photo identification and insurance cards ready for verification. You will then receive a patient identification bracelet and be asked to remain in the waiting area of the Short Stay Unit until your name is called to go back into the Same Day Surgery Center.

## Same Day Surgery Center

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The Same Day Surgery Center is the location where you will be prepared for surgery and is located adjacent to the Short Stay Unit. A nurse will come and get you from the Short Stay Unit and take you back to the Same Day Surgery Center. You will be able to bring one family member back to be with you while you are being prepped for surgery. When you arrive to the Same Day Surgery Center, you will be assigned a bed and a nurse who will get you ready for surgery. Preparation of surgery will include: changing into a gown, placing an IV in your arm, and reviewing an informed consent. Your surgeon may see you in the Same Day Surgery Center or the Operating Room prior to surgery. You will meet your anesthesiologist immediately before your surgery. Your anesthesiologist will review all information needed to evaluate your general health. This will include your medical history, laboratory test results, allergies, and current medications. With this information, the anesthesiologist will determine the type of anesthesia best suited for you. He or she will also answer any further questions you may have.

## OR Holding

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Once your nurse is satisfied that you have been prepped for surgery and the operating room staff is ready for your surgery, you will then be transported to a staging area in the operating room called OR Holding. OR Holding is on the same floor as the Short Stay Unit and the Same Day Surgery Center. OR Holding is the final place

where you will go before you are transported into the OR suite where your procedure will take place. Once it is time for you to be transported into the OR Holding, your family member will be asked to wait for you during your procedure in the waiting area of the Short Stay Unit. Your family member will be given a number that they can use in the waiting area to track your progress through the surgery as it is updated by our OR staff. There are large screen monitors placed in the waiting areas where your family members can use this number to track your progression from surgery to the recovery room.

## **PACU / Recovery**

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The Post Anesthesia Care Unit (PACU) or Recovery Room is where you will be transported after your surgery has been completed. In the PACU you will be assigned a bed space and a nurse. Your nurse will be monitoring you very closely as you begin your recovery from surgery and the anesthesia that you were administered during surgery. As the nurse is performing his/her duties, a pain management specialist will come see you to begin the management of your pain/discomfort. Please be completely honest when rating your level of pain or discomfort to the pain management specialist we want you to be as comfortable as possible. Once the PACU team is satisfied with your progress, it will be time for you to have visitors. Visitors will be allowed in the PACU two at a time. A volunteer at the Volunteer Desk in the waiting area of the Short Stay Unit will inform your family when it is the appropriate time for you to have visitors. The volunteer will then direct the visitor to the PACU where the visitor will be instructed to call into the PACU from a phone located outside. The visitor will then be granted admission into the PACU and will be instructed to wash his/her hands before coming to your bedside.

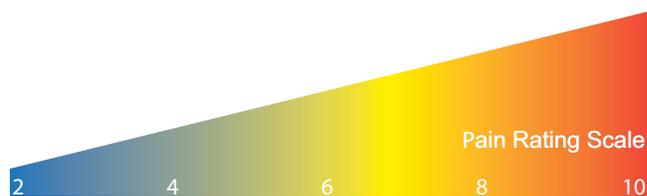
When the PACU team is satisfied with the progress of your initial recovery after surgery, they will make arrangements for you to be transferred to the orthopedic nursing unit. In the majority of cases, patients will be transferred after

their stay in the PACU to 2700; however a few patients will require further monitoring in a telemetry unit before arriving to 2700. Your surgeon will be able to let you know if he/she suspects that you may need to go to a telemetry unit before arriving to the Orthopedic Unit.

## **Pain Management**

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It is important to understand that with total knee replacement surgery, just like any surgery that a patient would undergo there will be pain and discomfort. The Joint Institute team comprised of your surgeon, anesthesiologists, nurses, and staff is committed to managing the postoperative pain and discomfort in order to ensure a complete and positive recovery from knee replacement surgery. With that commitment in mind we have developed a pain management protocol that will manage your pain so that you can meet the goals that we have set for you for discharge and a smooth transition to home. This next section will describe how we will measure the level of pain you are experiencing and list your options for pain management.



## **Pain Rating Scale**

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In order to measure the level of pain that our patients are experiencing after your knee surgery and during the days recovering at the medical center we utilize a pain rating scale. The pain rating scale begins with the number 2 and goes to the number 10. A rating of 2 would mean that you are experiencing mild discomfort and a rating of 10 on the scale would mean that you are in severe pain. Our team will begin asking you for a pain rating immediately after surgery once you wake up from anesthesia in the PACU, and we will continue to ask you for a rating on a regular basis until you are discharged from the unit.

Please be completely honest with staff when they ask you to give them a pain rating. The last thing that we want is for our patients to “grin and bear it.” We would like to be as proactive as possible with managing your pain please do not wait to see if the pain will get better before letting staff know that you are in pain.

## ***Options for Pain Management***

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You have two options available for pain management after knee surgery. The options include medications and pain interventional procedure. The medication regimen that we have designed is low in opioids or narcotics in order to reduce the number of side effects that you will encounter as well as help return your bowels to normal function as quickly as possible. You will be administered these medications on a regular schedule beginning in the PACU. In addition to the medications that you will receive to ease the pain after surgery, you may receive a pain interventional procedure called a PNC (peripheral nerve catheter). Many patients receive a PNC during surgery or immediately afterward in the recovery



room. The PNC provides a continuous infusion of numbing solution into the major nerve near your surgical site. This block will help alleviate some pain around the front of your knee. In addition to the PNC, knee patients may also receive an iPACK Block (infiltration between popliteal artery and capsule of knee), this is similar to the PNC but will not have a catheter, and will help target posterior knee discomfort. The IPACK block is a one-time single block, and typically will last 18-24 hours.

## ***Alternative Pain Management Techniques:***

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- ▶ Distraction (Methods such as reading and talking can turn away attention from pain.)
- ▶ Guided Imagery (Meditation and breathing exercises)
- ▶ Cold Therapy (Applying ice packs can reduce pain.)
- ▶ Music Therapy
- ▶ Relaxation (Decreasing stress, reducing muscle tension or remembering pleasant experiences can help reduce pain.)

## ***Pain Management Goal***

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Our goal at the Joint Institute when it comes to pain management is twofold. We want to keep you as comfortable as possible while utilizing little to no opioid or narcotic medication. Achieving this goal will allow you to complete the activities that we have planned for you in order to meet the goals that we have set for discharge from the medical center.

## ***Surgery Day - What to expect***

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Once you arrive on the unit, you will be placed in your bed space and assigned a nurse. Your nurse is fully trained in the Joint Institute as well as the rest of the staff and they will continue your care. Upon arrival, your nurse will give you an incentive spirometer and instruct you how to use it. It is important that you use the incentive spirometer each day of your recovery. Your nurse will ask you to perform 10 deep breaths with the incentive spirometer each hour that you are awake during

the day. The incentive spirometer is not a breathing treatment or supplemental oxygen, but a tool to help you perform some deep breathing exercises. These deep breathing exercises help you expand your lungs and breathe easier after surgery. Without it, you are at risk for pneumonia and a delay in your recovery. It is important to note that at some point after your arrival to the unit your nurse will want to assist you out of bed and into a chair. An orthopedic recliner chair will be placed at your bedside for you to sit in. It is important that you begin to move and sit out of bed after surgery. Getting out of bed will help you feel better and begin returning to normal function. When you are ready to get back into bed, please call your nurse and he/she will assist you back into bed. Based on what time you arrive to the unit you may even begin physical therapy on day of surgery. Once you are in bed for the night, please try to get some rest because there will be much more physical activity tomorrow.

### ***After Surgery – Day One to Discharge***

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Each day after surgery you can expect to be bathed, dressed, and helped out of bed by 7:00 a.m. and seated in a recliner in your room. Your surgeon or physician's assistant will visit you in the morning. It is recommended to take your pain medications 30-45 minutes prior to your physical therapy to help keep you comfortable during your sessions. Your morning session will start at 9:00am or shortly after. This session is an individual session with the therapist. The physical therapist will perform an evaluation and begin walking you with walker or crutches, as well as advance you to stairs. Group therapy each day will begin at 1:30pm in the 2700 gym, your therapist will come to get you and walk with you to class. This is a group activity that will focus on strengthening and conditioning exercises. Your coach is encouraged to be present as much as possible. Visitors are welcome, preferably late afternoons or evenings. We encourage our patients to be ambulatory throughout their stay in the hospital. Once the physical therapist has



given you the green light to walk around, we encourage you to do so around the orthopedic unit. Please remember your safety is most important, if you feel dizzy, lightheaded, or weak do not get up without calling the call bell for assistance.

### ***Discharge Criteria***

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Patients are discharged from the Joint Institute after they have met specific criteria. The discharge criteria have been developed by your surgeon, anesthesiologists, and staff in order to ensure your safe transition out of the medical center. The following discharge criteria must be met before a patient can be discharged home: their pain is well controlled by oral medication, urinating without difficulty, and ambulating with assistance or independently. Once you have met the criteria for discharge your nurse will recommend to your surgeon that it is time for you to be discharged from the medical center.

## Going home

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The Case Manager will come to see you at your bedside to begin the process on postoperative day one after an initial evaluation from the physical therapist. Home Health Care Services and equipment needs will be arranged for you by the Case Manager before you leave. Home Care Services are agencies that will come into the home and continue to work with you during your recovery. You will see a Registered Nurse, Physical Therapist and in some cases, sessions from an Occupational Therapist. These sessions usually begin 24-48 hours after discharge and will continue until you are ready to progress to outpatient physical therapy.

If you are going home after discharge from the medical center, you will need someone that is available to drive you home. You will receive discharge instructions from your nurse before leaving the medical center. The discharge instructions include information about medications, and precautions (if applicable). It is important that you plan for a stop to the pharmacy on the way home. Your surgeon will write prescriptions for medications that he/she would like you to take after at home. These include prescriptions for pain medications, so it is important to fill them to continue your pain management. For your convenience we have a retail pharmacy on the ground floor of the medical center. If you would like to have your prescriptions filled by our retail pharmacy just tell your nurse. Your nurse will contact the retail pharmacy and all prescriptions will be delivered to you at the bedside before you leave. Our retail pharmacy operates just like your neighborhood pharmacy so please remember to bring your prescription drug plan card if you have one to the medical center.

## If you are going to skilled nursing facility

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If it is deemed necessary that a Skilled Nursing Facility (SNF) will be a part of your recovery process after you leave the hospital, let the case managers know of your intentions. Please give at least two choices of skilled nursing facilities that you would like to go to in the event your first option is unavailable. Please remember that rehabilitation stays must be approved by your insurance company prior to payment. A patient's stay in a rehab facility must be done in accordance with the guidelines established by Medicare or other insurance carriers. Although you may desire to go to rehab when you are discharged, your progress with physical therapy and recommendations by your care team will be monitored by your insurance company while you are in the hospital. Upon evaluation of your progress, you will either meet the criteria to benefit from rehab or it may be recommended that you return home with home care services. Therefore, it is important for you to make alternative plans preoperatively for care at home. In the event rehabilitation is not approved by your insurance company, you can go to rehabilitation and pay privately. Please keep in mind that the majority of our patients do so well that they do not meet the guidelines to qualify for rehabilitation. Also keep in mind that insurance companies do not become involved in social issues, such as lack of caregivers, the need to care for pets, etc. These are issues you will have to address before admission.



# Postoperative Care

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## *Caring For Yourself at Home*

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When you go home, there are a variety of things you need to know for your safety, your recovery, and your comfort. Don't forget to Walk Walk Walk!

## *Control Your Discomfort*

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- ▶ Take your pain medicine at least 30 minutes before physical therapy.
- ▶ Gradually wean yourself from prescription medication to a non-prescription pain reliever. You should ask your physician which over-the-counter medications are safe for you to use.
- ▶ Change your position every 45 minutes throughout the day.

## *Equipment*

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- ▶ If equipment is needed, the Case Manger can order it for patients prior to discharge from the hospital. Equipment will only be ordered for patients going home. Typically, if needed a walker or crutches will be provided.
- ▶ Additional equipment may be needed once you are home. The home care therapist can recommend proper equipment once he/she has done their initial home evaluation.

## *Swelling, Bruising and Cold Therapy*

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- ▶ You may experience swelling following the procedure. Also, you may notice bruising near and around the incision site. As the healing progresses, the swelling and bruising will reduce. Cold therapy or an ice pack can help reduce pain and swelling. To help relieve discomfort, place an ice pack while awake with a barrier such as a towel to protect your skin and incision site and apply for 15-20 minutes 3-4 times per day.

## *Body Changes*

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- ▶ Your appetite may be poor. Drink plenty of fluids to keep from getting dehydrated. Your desire for solid food will return.
- ▶ You may have difficulty sleeping, which is normal. Do not sleep or nap too much during the day.
- ▶ Your energy level will be decreased for at least the first month.
- ▶ Pain medication that contains narcotics promotes constipation. Increasing your fiber, drinking fluids and walking can help. Use stool softeners or laxatives, if necessary.

## *Caring For Your Incision*

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- ▶ Keep your incision clean and dry.
- ▶ The bandage that is applied in the hospital can typically stay on for 5-7 days, as long as it has stayed clean and intact. If your bandage has become soiled or if you have increased drainage or pain from incisional sight, you will want a medical professional to remove the bandage and assess the incision.
- ▶ Your physician may have specific instructions on when you can shower
- ▶ Notify your surgeon if there is increased drainage, redness, pain, odor, or heat around the incision.
- ▶ Take your temperature if you feel warm or sick. Call your surgeon if it exceeds 100.5° F.
- ▶ Always practice proper hand hygiene prior to changing bandage



## Walking

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Walking is an important part of your recovery, but guidelines must be followed. They include:

- ▶ Walk daily and increase the distance each day, allowing rest between activities.
- ▶ Use walker or crutches until the therapist has transitioned you off of them.

### Walking Techniques:

1. Move the walker forward.
2. With all four walker legs firmly on the ground, step forward with surgical leg. Place the foot in the middle of the walker area. Do not move it past the front feet of the walker.
3. Step forward with the non-surgical leg.
4. NOTE: Take small steps. DO NOT take a step until all four walker legs are flat on the floor.

## Sitting and Driving

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- ▶ Do not sit for extended periods of time. Getting up, walking and changing positions are important to recovery.
- ▶ Stop every hour during long car trips to get out and move around.
- ▶ As a safety precaution, do not drive while taking pain medications or until cleared by your surgeon.

### Car Transfer:

1. Push the car seat all the way back; recline it if possible, but return it to the upright position for traveling.
2. If you need to, place a plastic trash bag on the seat of the car to help you slide and turn frontward.
3. Back up to the car until you feel it touch the back of your legs.
4. Reach back for the car seat and lower yourself down. Keep your operated leg straight out in front of you and duck your head so that you do not hit it on the doorframe.
5. Turn frontward, leaning back as you lift your operated leg into the car.

## Standing

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Do NOT pull up on the walker to stand!

Sit in a chair with arm rests when possible.

1. Scoot to the front edge of the chair.
2. Push up with both hands on the armrests. If sitting in a chair without armrest, place one hand on the walker while pushing off the side of the chair with the other.
3. Balance yourself before grabbing for the walker.

## In and Out of Bed

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### When getting into bed:

1. Back up to the bed until you feel it on the back of your legs (you need to be midway between the foot and the head of the bed).
2. Reaching back with both hands, sit down on the edge of the bed and then scoot back toward the center of the mattress. (Silk pajama bottoms, satin sheets, or sitting on a plastic bag may make it easier).
3. Move your walker out of the way but keep it within reach.
4. Scoot your hips around so that you are facing the foot of the bed.
5. Lift your leg into the bed while scooting around (if this is your operated leg, you may use a cane, a rolled bed sheet, a belt, or your theraband to assist with lifting that leg into bed).

6. Keep scooting and lift your other leg into the bed.
7. Scoot your hips towards the center of the bed.

**NOTE: DO NOT CROSS YOUR LEGS** to help the operated leg into bed.

**When getting out of bed:**

1. Scoot your hips to the edge of the bed.
2. Sit up while lowering your non-surgical leg to the floor.
3. If necessary, use a cane, a rolled bed sheet, a belt or your Theraband® to lower your surgical leg to the floor.
4. Scoot to the edge of the bed.
5. Use both hands to push off bed. If the bed is too low, place one hand in the center of the walker while pushing up off the bed with the other.
6. Balance yourself before grabbing for the walker.



### **Sports and Exercise**

While exercise is good, it's important to recover as directed by your doctor.

- ▶ Do not engage in high-impact activities such as running, jumping, aerobics, basketball, tennis and skiing until cleared by your surgeon.
- ▶ Realistic activities include unlimited walking, biking, and other low-impact sports.

### **Stairclimbing**

There are no restrictions other than discomfort that would limit you from stairclimbing. Please remember to take it slow and have someone with you if needed.

1. Ascend with non-surgical leg first (Up with the good).
2. Descend with the surgical leg first (Down with the bad).

## ***Bathing***

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Do not submerge your incision site, which includes restrictions to baths, hot tubs and swimming pools, until the incision site is completely healed.

## ***Sexual Activity***

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Sexual activity may be resumed once the surgical incision has healed.

## ***Follow up with you doctor***

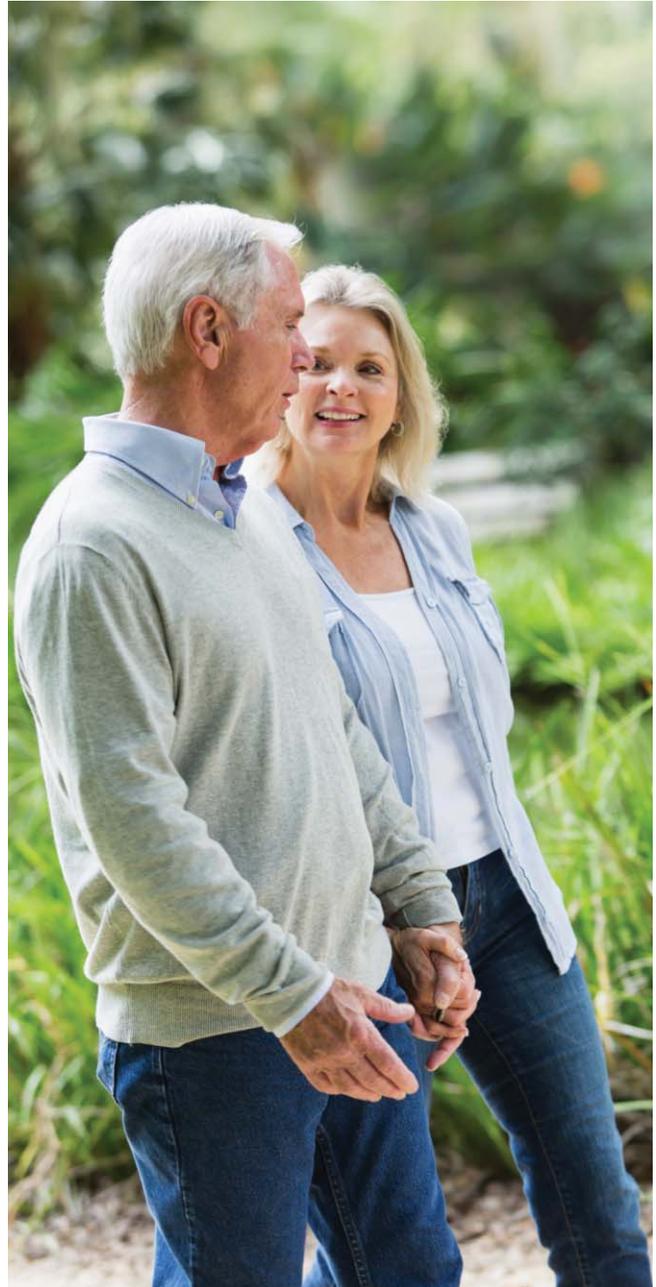
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Most surgeons will require a follow up between 7-10 days post-surgery. You can contact your surgeon's office to arrange this appointment.

## ***General Information***

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- ▶ Take antibiotics before you are having dental work or other invasive procedures. Speak with your surgeon regarding his/her protocols.
- ▶ Although the risks are very low for postoperative infections, it is important to realize that the risk remains. A prosthetic joint could possibly attract the bacteria from an infection located in another part of your body. If you should develop a fever of more than 100.5° or sustain an injury such as a deep cut or puncture wound you should clean it as best you can, put a sterile dressing or an adhesive bandage on it and notify your doctor. The closer the injury is to your prosthesis, the greater the concern. Occasionally, antibiotics may be needed. Superficial scratches may be treated with topical antibiotic ointment. Notify your doctor if the area is painful or reddened.
- ▶ Get a card from the doctor that states you had a joint replacement. Carry the card with you, as you may set off security alarms at airports, malls, etc.
- ▶ When traveling, stop and change positions hourly to prevent your joint from tightening.



# Prevention and Recognition of Potential Complications

## Activity Guidelines

Exercising is important to obtain the best results from total knee surgery. Always consult your physician or physical therapist before starting a home exercise program. You may receive exercises from a physical therapist at an outpatient facility or at home. In either case, you need to participate in an ongoing home exercise program as well. You may continue the same set of exercises indicated in the pre-operative section of this guidebook, starting on page 5. Speak with your surgeon or physical therapist for additional home exercises, which might be appropriate for your recovery.

## Prevention and Recognition of Potential Complications

There are some complications that patients are at risk for following intestinal surgery. It is important for you to be aware of the signs and symptoms of these conditions so that you can quickly recognize them and seek treatment. If you think that you are experiencing any of the signs and symptoms of these conditions, you should call your doctor and seek treatment immediately. These potential complications include:

- ▶ Blood Clots
- ▶ Pulmonary Embolus
- ▶ Infection
- ▶ Pneumonia

## Blood Clots

Blood clots or deep vein thrombosis (DVT) is a condition in which a clot forms in the blood vessels of the legs. A clot forms when a patient has been sedentary for a period of time either lying in bed or sitting in a chair. Surgical patients are commonly at risk for blood clots because it can be more challenging to get up and walk after surgery. A blood clot is very painful and needs to be treated immediately in a medical center with intravenous blood thinners. An overwhelming majority of patients in the Comprehensive



Recovery Pathway do not experience blood clots due to the fact that you will be expected to get up and walk very quickly after surgery which will move the blood through your legs preventing clotting. However it is still important to be able to recognize the signs and symptoms of a blood clot in order to seek treatment quickly.

### Blood Clot – Signs and Symptoms

- ▶ Swelling in calf, thigh, or ankle that does not go down with elevation
- ▶ Pain or tenderness in calf
- ▶ Can be in either leg

### Blood Clot – Prevention

- ▶ FlowTrons®
- ▶ Anticoagulant Medication
- ▶ Physical Therapy
  1. Ankle pumps
  2. Early walking

## ***Pulmonary Embolism***

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A pulmonary embolism is a serious and potential life threatening condition were a blood clot forms in your legs and travels to your lungs. If you think you have the signs and symptoms of a pulmonary you should call 911 and get to a medical center for treatment.

### ***Pulmonary Embolism – Signs and Symptoms***

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- ▶ Sudden chest pain
- ▶ Difficulty or rapid breathing
- ▶ Shortness of breath
- ▶ Sweating
- ▶ Confusion
- ▶ Call 911

### ***Pulmonary Embolism – Prevention***

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- ▶ Prevention of a blood clot
- ▶ Recognition of a blood clot
- ▶ Quick treatment of a blood clot

## ***Infection***

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Having any surgery performed puts you at risk for surgical site infection however surgical site infection can be prevented. It is important that, after you leave the medical center, you keep your incision clean and dry.

### ***Infection - Signs and Symptoms:***

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- ▶ Red incision
- ▶ Increase pain or swelling
- ▶ Draining of the incision
- ▶ Temperature elevation > 101°

## ***Infection – Prevention***

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- ▶ Keep your incision clean and dry

## ***Pneumonia***

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All surgical patients are at risk for pneumonia especially those who spend a long time under anesthesia. Pneumonia is an inflammation of the lungs and can be caused by an infection from bacteria or a virus. Fortunately pneumonia can be prevented by using a device called an incentive spirometer after surgery as well as getting out of bed and walking after surgery with the assistance of your nurse, a family member, or friend.

### ***Pneumonia – Signs and Symptoms***

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- ▶ Cough
- ▶ Fever
- ▶ Shortness of Breath
- ▶ Painful Breathing

### ***Pneumonia – Prevention***

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- ▶ Incentive Spirometer
- ▶ Walking



# Appendix

## Exercise Your Right

### Put Your Health Care Decisions in Writing

It is our policy to place patients' wishes and individual considerations at the forefront of their care and to respect and uphold those wishes.

### What are Advance Medical Directives?

Advance Directives are a means of communicating to all caregivers the patient's wishes regarding health care. If a patient has a Living Will or has appointed a Health Care Agent and is no longer able to express his or her wishes to the physician, family, or hospital staff, the Medical Center is committed to honoring the wishes of the patient as they are documented at the time the patient was able to make that determination.

There are different types of Advance Directives and you may wish to consult your attorney concerning the legal implications of each.

LIVING WILLS are written instructions that explain your wishes for health care if you have a terminal condition or irreversible coma and are unable to communicate.

APPOINTMENT OF A HEALTH CARE AGENT (sometimes called a Medical Power of Attorney) is a document that lets you name a person (your agent) to make medical decisions for you, if you become unable to do so.

HEALTH CARE INSTRUCTIONS are your specific choices regarding use of life sustaining equipment, hydration and nutrition, and use of pain medications.

On admission to the hospital you will be asked if you have an Advance Directive. If you do, please bring copies of the documents to the hospital with you so they can become a part of your Medical Record.

Advance Directives are not a requirement for hospital admission.

## Please Read Before The Day Of Surgery!

### Eating and Drinking Guidelines before Surgery, Testing or Treatment

Latest time you can eat or drink*	Type of food/drink	Recommendations
<b>6 hours before</b> you are told to arrive at hospital	Light Snack	Option 1: Cereal with skim milk Option 2: Hardboiled egg with apple juice Option 3: Fruit with tea or coffee Option 4: One slice of turkey with toast Option 5: Ensure Enlive/Glucerna Shake for diabetics <b>NO:</b> Fried or Fatty Foods
<b>2 hours before</b> you are told to arrive at hospital	Clear Liquids (12oz)	Option 1: Water Option 2: Apple Juice Option 3: Soda Option 4: Gatorade Option 5: Black Tea Option 6: Black Coffee Option 7: Suggested pre-operative carbohydrate drink E.G.: Ensure Clear

\* Breastfed infants may have breastmilk up to 4 hours before arriving at the hospital

\* Diabetic patients with gastroparesis - please consult your physician for more detailed instructions on eating and drinking

## What You Need to Know About Herbal Supplements When Preparing for Surgery

From the Department of Anesthesiology and Perioperative Medicine

### What is herbal medicine?

Herbal medicine usually refers to extracting, modifying and using ingredients from plant's seeds, berries, roots, leaves, bark or flowers for medicinal purposes. They are considered "natural" products and are sold in many pharmacies and health stores. The use of plants for medicinal purposes has a long history and goes back to ancient times. It has been used by many cultures including the Ancient Egyptians, Chinese, Indians and Africans. A growing number of people are using herbal products for preventive and therapeutic purposes.

### How do herbal supplements work?

Scientists are not exactly sure what specific ingredient in a particular herb works to treat a condition or illness. Whole herbs contain many ingredients and they may work together to produce an overall beneficial effect.

### What conditions are herbal supplements used for?

Herbal supplements may be used to treat many conditions, such as allergies, asthma, eczema, premenstrual syndrome, rheumatoid arthritis, fibromyalgia, migraines, menopausal symptoms, chronic fatigue, cancer and many other conditions.

### Are there any dangers in taking herbal supplements?

Used correctly, herbal supplements can help treat a variety of conditions, and in some cases, may have fewer side effects than some prescription medicines. Unfortunately, "natural" does not necessarily mean safe. The FDA (Food & Drug Administration) does not regulate herbal supplements the same way it does prescription and over-the-counter (OTC) drugs. The standards of safety are not the same. Because these supplements are unregulated, they are often

mislabelled and may contain additives and contaminants that are not listed on the label. Some herbal supplements may have an unexpected side effect and can cause allergic reaction, interact with prescription medication and are toxic if used improperly or at high doses. Taking herbal supplements on your own increases your risk of adverse effects. It is very important to always speak with your doctor or pharmacist before taking herbal supplements.

## Herbal Supplements and Surgery

### Are there side effects of herbal supplements?

Yes! Although herbal supplements seem harmless, some can be potentially dangerous, especially if the patient has a heart problem or if the patient is preparing for a surgical procedure. Here is a listing of just a few of those herbal medications that can have adverse effects when preparing for surgical procedures:

Herbal Product	Side Effect
Garlic	Increases bleeding
Ginger	Increases bleeding
Ginkgo (Ginkgo biloba)	Increases bleeding
Ginseng	Increases bleeding, increases blood pressure, increases heart rate
Goldenseal	Increases blood pressure and worsens inflammation
Echinacea	Worsens inflammation
Ephedra	Increases blood pressure
Feverfew	Increases bleeding
Fish Oil	Increases bleeding
Kava Kava	Prolongs anesthesia, excessive sedation and delayed emergence
Licorice	Increases blood pressure and worsens inflammation
Saw Palmetto	Increases bleeding
St. John's Wort	Prolongs anesthesia, excessive sedation and delayed emergence
Valerian	Prolongs anesthesia, excessive sedation and delayed emergence
Vitamin E	Increases bleeding

### Can herbal supplements interact with prescription medication?

Yes! Some herbal supplements can interfere with prescription medications. Here is a listing of just a few of those herbal medications that interact with prescription medications.

Herbal Product	Drug It Interacts With
Ginkgo biloba	Aspirin Coumadin (warfarin) Plavix (clopidogrel) Persantine (dipyridamole) Ticlid (ticlopidine)
Ginseng	Warfarin
St. John's Wort	Antidepressants

**Can I continue taking herbal supplements while preparing for surgery?**

The American Society of Anesthesiologists has recognized the potential for adverse reactions and recommends that all herbal supplements be stopped 2-3 weeks before surgery. All patients are strongly advised to tell their anesthesiologist

about any medications they are taking, including all vitamins, herbal supplements and other alternative substances. These products can interfere with anesthesia and potentially cause complications during surgery. Be sure to bring all substances with you, prescription or over-the-counter, when you meet with your anesthesiologist before surgery and on the day of your procedure.

**How can I find a qualified herbalist in my area?**

For additional information, or to locate a licensed naturopath in your area, please visit the American Association of Naturopathic Physicians (AANP) at: [www.naturopathic.org](http://www.naturopathic.org).

## Patient Contact Log

	Name	Contact Information
Orthopedic Surgeon		
Pre-Admission Testing		973.322.8884
Anesthesiologist		973.322.5512
Orthopedic Resident		
Medical Doctor		
Physician Assistant		
Nurse Manager – 2700		973.322.2267
Joint Replacement Coordinator		973.322.9908
Case Manager		
Social Worker		
Home-Health Care Agency		
Skilled Nursing Facility		



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