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## 1. UNDERSTANDING JOINT REPLACEMENT SURGERY

### Overview of the Procedure

Orthopaedics as a surgical specialty has made great progress over the last several decades. Many major advances have been in the areas of joint replacements, repair of fractures and repair of an abnormality at birth.

Sir John Charnley developed total hip replacement surgery in England during the 1960s. Orthopaedic surgeons in the United States began using the technique in the early seventies. Based on their success with total hip replacements, surgeons began replacing other complex joints such as knees, elbows and shoulders.

Joint replacement is surgery to replace an arthritic or badly damaged hip or knee joint with man-made parts. The man-made part is called a **prosthesis** (prahs-thee-sis) and can be made of many different materials, including metal, polyethylene (or plastic), ceramics or a mixture of materials. The surgery is done to lessen pain and make moving easier and better.

### Why You Need a Joint Replacement

Usually people who need a joint replacement have a long history of osteoarthritis (ah-stee-o-art-ri-tis) or rheumatoid (rew-muh-toid) arthritis of the hip or knee.

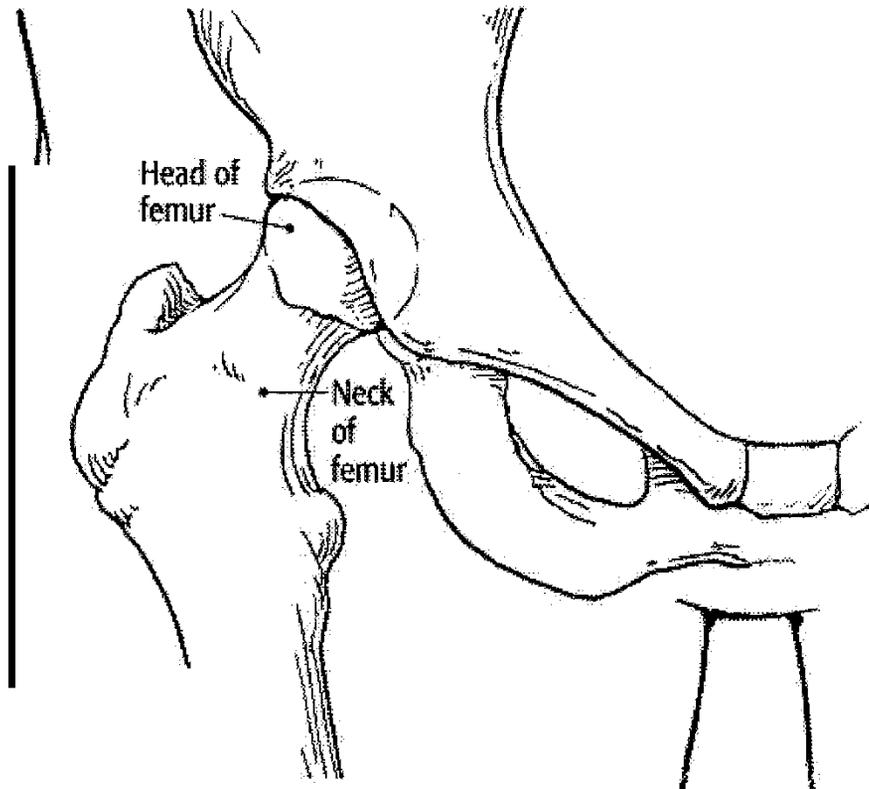
- When you have **rheumatoid arthritis**, the tissue lining the joint (**synovium**) becomes inflamed and causes pain. Over the years, this inflammation causes swelling in the joint and damages the cartilage and bone of the affected joints. **Cartilage** is the pearly white covering at the ends of bones that provides a smooth surface.
- When you have **osteoarthritis**, the cartilage becomes frayed and pitted from wear and tear of repeated stress and trauma. When the cartilage is damaged, the normally smooth movement at the joint is replaced by painful friction. Osteoarthritis occurs primarily in weight-bearing joints such as the hip, knee or foot.

As described above, joint replacement surgery involves replacing the worn joint with a prosthesis or artificial joint. Your surgeon will choose the prosthesis best for you. Once your joint is more stable, less painful and stronger, you will be better able to do some of the activities that you enjoy. Sports such as golf and skiing are allowed. Impact sports that involve running, however, cause increased wear on the prosthesis and are not advised.

## About the Procedures

### Total Hip Replacement

The normal hip is shown in Figure 1. The head of the thighbone; or femur, fits into the socket of the pelvic bone to form the hip joint. The most common reason for a hip replacement is related to wear and tear of the hip joint.

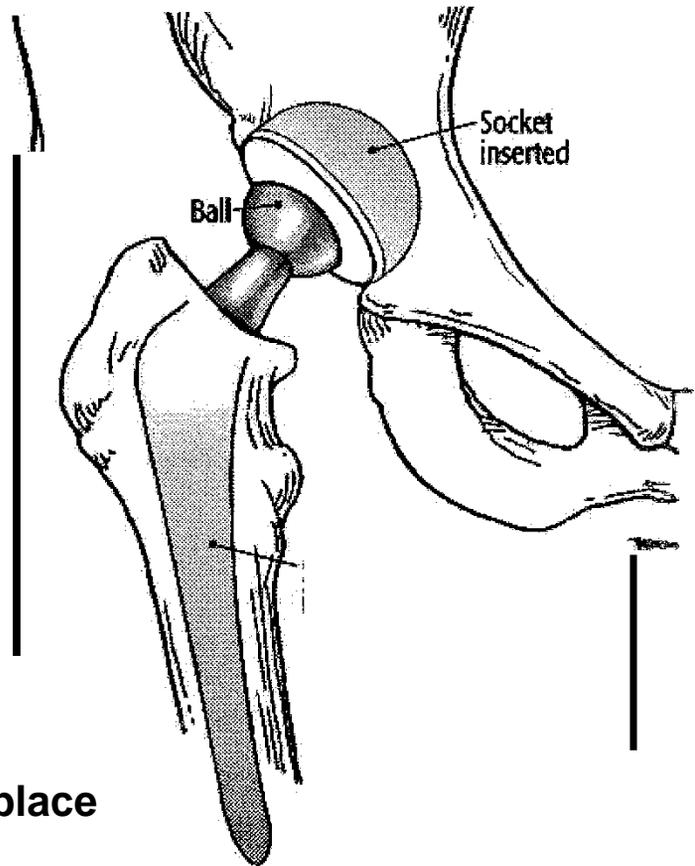
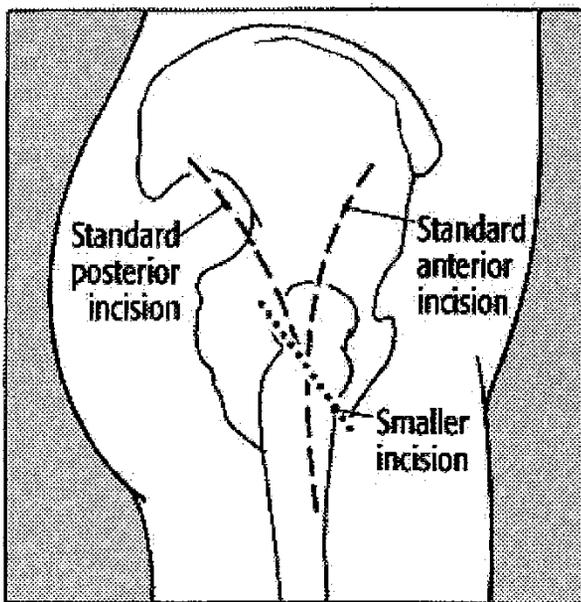


**Figure 1. Normal hip**

During hip replacement surgery, the surgeon makes an incision to expose the hip joint. Once the incision is deep enough for the surgeon to see the joint, the head of the femur is removed. The surgeon prepares the hip socket (**acetabulum**) by removing the damaged cartilage and replacing it with a prosthetic part or cup that serves as the new socket. Then, the surgeon forms a canal in the exposed end of the femur. The stem and its bearing surface ("ball") is then placed into the canal. The ball may or may not be cemented in place. Finally, the ball and socket are lined up precisely (see Figure 2). A drain tube may be placed into the wound, and the wound is closed. A bandage is applied.

With certain patients, many orthopedic surgeons are using smaller incisions. This technique involves a minimal incision that will allow adequate exposure of the hip. The advantage of a smaller incision is that it may result in a shorter hospital stay and a quicker *recovery*.

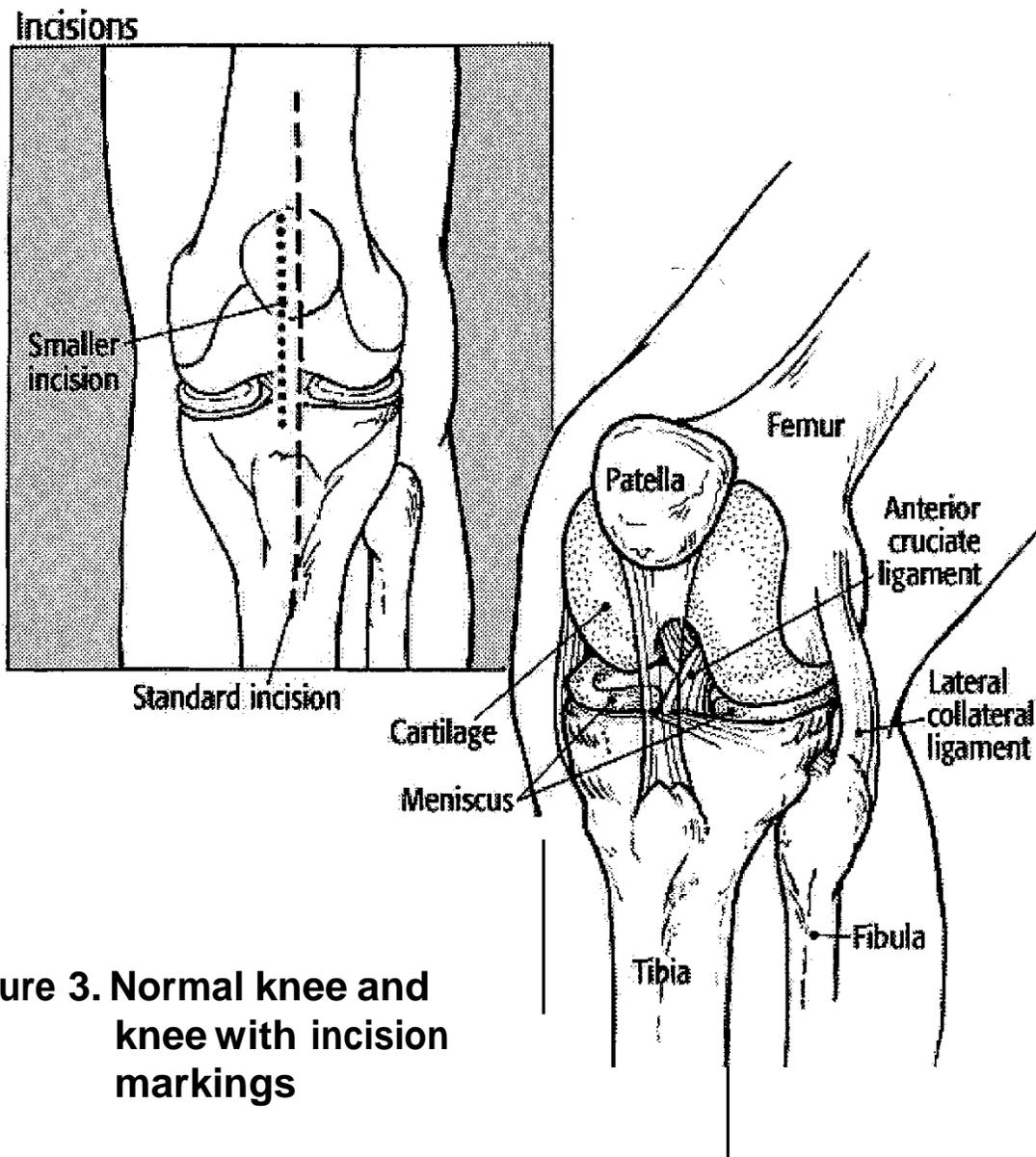
## Incisions



**Figure 2. Hip with prosthesis in place**

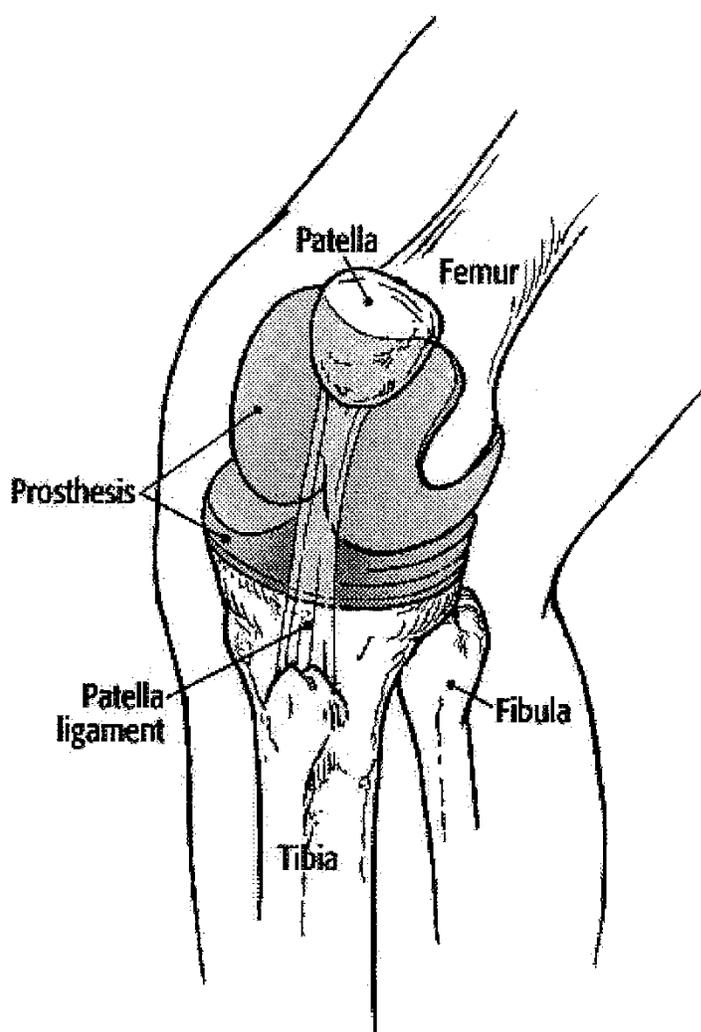
## Total Knee Replacement

During knee replacement surgery, the surgeon makes an incision over the affected knee to expose the knee joint (see Figure 3). The surgeon makes the incision deep enough to allow the **patella** (kneecap) to be moved aside to reach the joint. This joint forms the hinge between the **femur** (thighbone) and the **tibia**, the main (shin) bone in the lower leg. The surgeon shapes the lower end of the femur and the upper end of the tibia, in preparation for the prosthetic implants.



**Figure 3. Normal knee and knee with incision markings**

Prosthetic knee implants are generally made of metal and plastic. They are designed to completely replace the original knee joints (see Figure 4). If cement is used, it is placed on the ends of the femur and the tibia. The implants are inserted into the ends of those bones. A plastic "button" may be attached to the undersurface of the kneecap to replace the arthritic surface. In some cases, replacement of the kneecap is not necessary. A drain tube may be placed into the wound, and the wound is closed. A bandage is applied.



**Figure 4. Knee with prosthesis in place**

Similar to hip replacement surgery, some surgeons are using smaller incisions with certain patients. Everything else about the procedure is the same. It is possible that this technique may result in a shorter hospital stay and a quicker recovery.

Another procedure to repair knees is called a **unicompartmental knee replacement**. This procedure is done when damage to the knee is greater in one area than the other, a condition called single compartment degenerative disease. In this procedure, the most worn portion of the knee joint is resurfaced while the remainder of the knee joint is left unchanged. The procedure is done through a shorter incision than a regular knee replacement. The materials used are the same, but the prostheses are smaller than the ones used for regular knee replacement. The operative time is about the same. The hospital stay is generally 1 to 2 days. Because the procedure is less invasive, patients usually need to use crutches for a shorter period following surgery.

### **What You Can Expect**

Joint replacement takes about 2 to 3 hours and requires about a 4-day stay in the hospital. Patients usually are admitted on the morning of surgery. Before either procedure, patients are taken to a pre-operative holding area. An intravenous line may

be placed into your vein. This line is a small tube that is placed using a needle. It allows the doctors and nurses to give you medications, as needed, during and after surgery. Families are welcomed to stay in the pre-operative holding area until it is time for you to receive anesthesia and you are taken to the operating room.

After surgery, you will be taken to a recovery area. The exact name of this area may differ in each hospital, but the function is the same. In this area, the nurses and doctors will check on you frequently. The time spent in this area can vary widely from person to person. You may not be transferred to your hospital room until late in the afternoon or evening.

Routine care after joint replacement involves wound care, physical therapy and muscle strengthening. These are described in greater detail later in this guide. Some patients will go to another health care facility for rehabilitation after their surgery. Some patients can go home if they feel well enough and can manage routine activities with the help of their family or other services. The plan for care after surgery depends on your needs as well as your insurance plan and coverage.

Recovering from joint replacement surgery depends on your general health before the procedure and the type of joint that is being replaced. The goal of this period is to comfortably return you to the activities of daily living. While most hip and knee replacements are successful in relieving pain and/or improving movement, recovery does take time. Most patients need at least 3 to 5 months to get back their strength and energy.

## Anesthesia

Anesthesia is an important part of any surgery. It is a type of medicine to make you comfortable during your surgery. It is routine practice for patients and family members to meet or at least talk on the phone with someone who specializes in anesthesia before surgery. Your surgeon will be working with you and the anesthesiologist to plan the best type of anesthesia for you.

Described below are the most common types of anesthesia used in joint replacement surgery. Depending on the type of joint replacement surgery, some type of general or regional anesthesia will be selected to keep you comfortable. Someone from the Anesthesia Department will be with you at all times in the operating room.

**General anesthesia** is medicine used to keep you completely asleep during surgery. The medicine may be given as a liquid in your intravenous (IV) tube or as gas that you breathe through a mask or a breathing tube. Once you are asleep, a tube is placed in your mouth and down your windpipe to allow you to breathe oxygen and anesthesia gas. After surgery the tube is usually taken out.

Some of the most common side effects of general anesthesia include sore throat, which usually lasts 1 or 2 days, dry mouth and feeling sick to your stomach. Throat , lozenges or gargling with warm salt water will help your sore throat. Rarely, more serious problems can occur. The anesthesiologist will describe these risks to you when you sign a consent form for anesthesia. This consent is separate from your consent for surgery.

A urinary catheter (small tube into the bladder) may be used for 1 to 3 days with this type of surgery. The tube is removed when you are up and about.

**Regional anesthesia** involves medicine that is injected through a needle into an area of the body to keep that part of the body numb. There are different types of regional anesthesia including spinals, epidurals, and nerve blocks.

- **Spinal and epidural anesthesia** is medicine put into your back through a needle. It makes your body numb from the waist and down. While lying on your side or sitting up, a needle is placed into your back and the medicine is given. You will not be able to move your legs when the medicine starts to work. You can move your legs 3 to 4 hours after surgery as the medicine wears off. The key difference between a spinal and epidural is that with an epidural a catheter or very small tube is left in place to take care of pain after surgery.
- **Nerve blocks** can be done for surgery on any part of the body. This involves injecting medicine to numb a specific nerve in a certain part of the body.

With any regional anesthesia, you will get some type of medication through your IV to make you feel sleepy and more relaxed. You may still feel pressure and/or pushing

where the surgeons are working. If you have pain or discomfort, tell your anesthesiologist who will give you more pain medicine.

Sometimes a combination of regional and general anesthesia is used depending on the type and duration of your surgery.

Sometimes it takes a while for the medicine to wear off. No matter what type of anesthesia you have, there will be many people watching you closely for any side effects.

### **Informed Consent**

You have the right to understand your health problem and treatment options in words you can understand. You will be told what tests, treatments and procedures may be done to treat your problem. Your doctor should also tell you about the risks and benefits of each treatment. Please feel free to ask questions.

Before surgery you will be asked to sign consent forms. Separate forms will be needed for surgery and anesthesia. The consent form is a legal document that gives your doctor permission to do certain tests, treatments and procedures. This form should tell you exactly what will be done to you and is required for the surgeon and anesthesiologist to proceed. You may also be asked to sign a consent form for admission to the hospital or a blood transfusion.

If you are unable to give your consent, someone who has permission can sign this form for you. By law, each hospital is required to ask you to identify a **health proxy** who can make decisions for you if you are unable to give consent. You will also be asked to sign a document that indicates you are aware of the hospital's policies for keeping patient information private.

## 2. PREPARING FOR SURGERY

Once you have scheduled your surgery, preparing yourself physically and mentally is important for a healthy recovery. Here are a few steps to help you get ready for your surgery.

### Preparing Yourself Physically

- **Pre-operative physical exam.** Before surgery, your orthopaedic surgeon will recommend a complete physical evaluation to be sure there are no conditions that could interfere with your surgery or recovery. This evaluation may include:
  - U An up-to-date physical exam by your primary care doctor
  - U An up-to-date evaluation by your cardiologist if you have a history of cardiac problems
  - U Several tests such-as blood samples, a cardiogram, chest x-rays and urine sample
- **Skin preparation.** Your skin should not have any infections or irritations before surgery, or your surgeon may need to delay your surgery. If you have either a skin infection or irritation, contact your orthopaedic surgeon for a program to improve your skin before surgery.
- **Dental check-up.** Although infections after joint replacement are not common, an infection can occur if bacteria enter your bloodstream. Since bacteria can enter the bloodstream during dental procedures, you should consider getting significant dental procedures (including tooth extractions and periodontal work) done before surgery. Routine cleaning of your teeth should be delayed for 3 months after surgery.
- **Urinary check-up.** A urological check-up before surgery may be needed if you have a history of recent or frequent urinary infections. Older men with prostate disease should consider a urologic evaluation and treatment before having joint replacement surgery.
- **Medications.** Be sure to tell your surgeon about the medications you are taking including any over-the-

counter medications, vitamins and herbals. Your orthopaedist, primary care doctor or anesthesiologist will advise you which medications you should stop or can continue taking before surgery. Seven to 10 days before surgery, you should

stop taking aspirin and other anti-inflammatory agents, except acetaminophen (Tylenol). Other drugs that should also be stopped

7 to 10 days before surgery include Plavix, Narcil, or other similar drugs. You should notify your surgeon if you are on warfarin (Coumadin) or another anticoagulation medication. A complete list of medications and substances that should be stopped before surgery is provided in the next section. Be sure to discuss this with your surgeon.

- **Allergies.** If you have allergies to drugs, food or latex, be sure to tell your surgeon.
- **Blood donation.** You may be advised to donate your own blood before your surgery. It will be stored in the event you need blood after surgery.

Here are some health tips that will help you focus on a smooth recovery and better health after surgery.

- **Stay as active as possible.** It may be difficult to stay active when your joints are stiff and painful. However, moving around as much as possible will keep your muscles strong so that after your surgery, recovery will be easier. Ideas for keeping yourself active before surgery include:
  - o Continue your normal activity and exercise programs.
  - o Walk as much as possible, even short distances, several times a day.
  - o Move your arms and legs, even while you are sitting. Exercising your arms will promote upper body muscle strength, which is important after surgery. The stronger your upper body is, the easier it will be to use crutches or a walker during your recovery.
- **Stop smoking.** If you smoke, try to stop or cut back on the number of cigarettes you smoke every day. Smoking can cause complications with the anesthesia you receive for your surgery. Stopping even for a short time can be helpful. For help, you may contact the Quit Smoking Programs at:
  - o Brigham and Women's Hospital, 617-732-8983.
  - o Massachusetts General Hospital, 617-726-7443

For further information, contact 1-800-TRY-TO-STOP or check the Web site [www.trytostop.org](http://www.trytostop.org).

- **Watch your weight.** If you are overweight, your doctor may ask you to lose some weight before surgery. This will lessen the stress on your new joint. You may want to contact a dietitian for help losing weight and maintaining a lower weight after surgery. Weight management resources are available by contacting the Nutrition Department at your hospital.
- **Vitamins, herbs and minerals before surgery.** Many people now commonly use vitamins, herbs and minerals to promote good health. These can be purchased at your local drug store

or supermarket and are considered helpful in some situations. For example, taking vitamin D (400IU) and calcium (1200 mgs) every day may help in healing and developing strong bones. However, certain herbs can affect bleeding, heart rate and blood pressure. Be sure to talk with your doctor about how these might work in your situation.

### **Preparing Yourself Mentally**

Having surgery can be stressful. Patients sometimes worry about how successful the surgery will be and what the recovery period will be like. It can be a difficult time in your life, but it also can be an opportunity to think about how to improve your overall health. Here are some ways to prepare yourself.

- **Learn as much as you can about the surgery.** Joint replacement surgery is now very common. There is a fairly typical pattern to recovery. By learning as much as possible about what to expect, you and your family will be better prepared for your hospital stay and recovery. This guide was designed with this in mind. Keep it as a handy reference for your hospital stay and recovery period. Share it with family members and friends who will be involved in helping you with recovery.

Classes about joint replacement surgery are offered at selected Partners hospitals. Check with your surgeon's office for more information. You will find a list of books, films and Web sites at the end of this book that also may be helpful.

- **Understand your health insurance coverage.** Before surgery, you and your family should take time to understand your health insurance coverage for the care you might need when you leave the hospital. In recent years, health care has changed in many ways. Patients and families often have questions about insurance coverage. No insurance program covers everything. Even programs like Medicaid and Medicare have limits. It is important for you and your family to know about your benefits so you can make good decisions about treatment and care.
- **Learn to relax.** Everyone has different ways of coping. Learning to relax can help get you through those difficult times. Relaxation exercises have become common for women preparing for childbirth, but in fact, these exercises can help you manage pain in any situation.

Relaxation exercises are breathing techniques that help reduce anxiety and tension immediately. You can do them any place, at any time, and no one will know that you are doing them. The more you take time to do this, the more you can train yourself to respond to stress differently. Many people find it especially helpful to do these exercises in frustrating situations like being stuck in traffic, being put on hold during an important phone call, waiting for someone, or any other stressful situation such as dealing with pain.

## **Planning for Your Recovery and Return Home**

It is never too soon to plan for your recovery and going home from the hospital. Although you will be able to walk with crutches or a walker soon after surgery, for 4 to 6 weeks you will need help with tasks such as cooking, shopping, bathing and laundry. Some patients will go to another facility after their hospital stay. You will be advised to go to an extended care facility (a rehabilitation hospital or skilled nursing facility) if you:

- Have other health conditions such as heart or lung problems or diabetes
- Live alone and do not have help

Several factors are used to select the most appropriate extended care facility. Generally, if you have health needs beyond the joint problem such as heart or lung problems or diabetes, your doctors will want to send you to a place where there is a doctor to check on you frequently, like a rehabilitation hospital. Here, the doctors can adjust your medications as needed so your recovery can progress as smoothly as possible. If you only need help getting back to your usual activity, you are more likely to go to a skilled nursing facility. In this setting, the nursing and rehabilitation staff assumes a more leading role in planning your care in consultation with your doctors.

Once the best type of place for your health needs is decided, you and your family will be given a few options for places close to your home and approved by your insurance company. Be sure to contact your insurance company if you are not sure about your options for care after surgery. The case managers or care coordinators in your hospital can help you identify which facilities your insurance company covers. It is best to get this information before your surgery. You may be able to visit these facilities with your family before surgery. However, you can never be sure that a space in a specific facility will be available when you are ready to leave the hospital. For this reason, it is important to visit more than one facility in your area.

Many patients can return home and receive services from a home care agency. We use the following list as a guide for making decisions about care after leaving the hospital. This is to ensure your safety and the safety of your joint after discharge. To go home, you must be able to:

- Walk 50 to 100 feet with your crutches or a walker
- Get in and out of bed safely by yourself
- Take care of your needs in the bathroom by yourself
- Walk up and down stairs with crutches if you have stairs
- Have help in your home--a family member, friend or visiting nurse

If you feel that home is the best place for you after your discharge, consider if someone will be there to help you manage your pain and do your daily exercises.

Ask your surgeon about hospital staff who can help you plan for whatever is needed when you leave the hospital. A case manager or care coordinator can meet with you and your family before surgery to review your options for care at home. Sometimes a home visit by a physical therapist can be arranged before you come to the hospital. During this visit, the therapist will advise you about general safety in your home and any equipment needed. They will also teach you about the use of crutches, proper seating, climbing stairs and techniques for moving in bed.

When you finally do go home, some things will make the transition for you and your family easier. The biggest concern is preventing any injury to your new joint. Creating a temporary living space on one floor in your home will help. We encourage you to check your home for possible hazards so you are as safe as possible from slips and falls. For example, be sure to remove all loose carpets and electrical cords from the areas where you walk in your home. Also make sure that any items you will need during your recovery are at waist-level or higher. Here is a list of items that you can purchase for your home before surgery:

- Secure handrails along all stairways
- Stable chair with a firm back and arms, also, a firm seat cushion that allows your knees to remain lower than your hips; for tall people, a chair with arms may be more comfortable
- Night lights for the bedroom and bathroom

All patients need help with shopping, cooking, laundry and other everyday activities when they return home. The rehabilitation staff at your care facility will help you plan for any other equipment you will need to help you with activities of daily living (referred to as ADLs) like showering and bathing. This equipment will likely include the following:

- Raised toilet seat
- Stable shower bench or chair for bathing
- Long-handled sponge and shower hose
- Bedside commode
- Securely fastened safety bars or handrails in your shower or bath

### 3. THE WEEKS AND DAYS BEFORE SURGERY

#### **Pre-Admission Visit**

Once your surgery has been scheduled, the schedulers in your surgeon's office will arrange a pre-admission appointment. It can be scheduled as much as 4 weeks in advance of your surgery. This is a separate appointment from your visit with your surgeon or primary care doctor. It will include visits with staff from many different departments including Anesthesia, Nursing, Physical Therapy and Social Services. It takes place in a special pre-admission test center. The purpose of this visit is to make sure you are fully prepared for your surgery without having to spend a long time going to many different places. The staff in the test center will coordinate paperwork from your surgeon's office and create a chart for your hospital stay that includes the results of the tests they perform.

When you arrive at the test center, you should check in with the front desk coordinator. The coordinator will ask your name, confirm your date of birth, the date of your scheduled surgery, the name of the surgeon performing the procedure, and information about your insurance coverage. The average pre-admission visit is about 2 to 3 hours long. You may eat before this visit unless you are scheduled to have surgery on the day of your visit or have been instructed otherwise. During your pre-admission visit, the staff reviews your paperwork, examines you and answers any questions about your procedure.

During the pre-admission visit, each care provider will review your information and visit with you in a separate exam room. Between sessions, you can relax in the waiting area until the next provider is ready to see you. If you need x-rays, you will be sent to the Radiology Department.

In some situations, patients are advised to have their own blood available prior to surgery. If so, this may require separate appointments at the Blood Bank depending on how much blood is needed.

On the day of your pre-admission visit, be sure to bring the information listed on the next page.

**PREPARING FOR YOUR PRE-ADMISSION VISIT**

In preparation for your pre-admission visit:

- o . Make a list of any questions you need to ask your surgeon or the hospital staff.
- . o Review your insurance coverage for care in the hospital and after discharge.  
Bring your insurance card.
- o Learn as much as you can about your procedure from this guide and any courses or patient education classes that your hospital provides. Review your pre-operative instructions.
- o Talk to your family about naming a health care proxy or someone who can make decisions for you if you are unable to do so.
- o Have the following information available to help your visit go more smoothly. Names,

addresses and phone numbers of all doctors you see, including specialists:

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List any medications and dosages you take on a regular basis, including vitamins, herbs and other over-the-counter medications:

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If you have had any recent tests at another hospital, be sure to find out if you need to bring copies of the reports with you:

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## Weeks Leading Up to Surgery

In the weeks leading up to your surgery, there are no dietary restrictions unless you are on a special diet. You should also continue to be as active as you can. Be sure to begin to discuss with your family or friends plans for your surgery and your care after leaving the hospital. Check with your surgeon's office about a home visit before your surgery. This home visit can be helpful in thinking through what you will need after surgery.

- **One week before your surgery.** In addition to any specific instructions you receive from your surgeon, below are some general directions given to all patients scheduled for joint replacement surgery.
  - o Do not take vitamin E or any herbal supplements for one week before surgery.
  - o If you have a fever or flu symptoms, contact your surgeon's office to reschedule your surgery, if necessary.
  - o Do not take aspirin, ibuprofen or any non-steroidal anti-inflammatory for 7 days before your procedure. If aspirin is prescribed for your heart or problems with your blood vessels, please check with your primary care doctor or cardiologist before stopping this. You may, however, continue to take acetaminophen (Tylenol) for pain, or ask your doctor about a different pain medication for the week before surgery.
  - o You may not be aware of the many medicines that contain aspirin. Most medicines that help to relieve the symptoms of cold or sinus congestion contain aspirin. Look at the ingredients on the label.

The following is a partial list of other over-the-counter products that contain aspirin or aspirin-like medicine. These may affect bleeding during and after surgery. If you are taking any of these medicines, check with your doctor about if and when you should stop taking them.

Advil	Alka-seltzer	Aluprin
Anacin	A.P.C. (P.A.C.)	Arthritis Strength Bufferin
A.S.A. and Codeine	Compound (Capsules No. 2 and No. 4)	
Ascriptin Bayer	Aspergum Bufferin	Aspirin
Aspirin Children's	Congesprin	Cephalgesic
Aspirin Coricidin	Coumadin	Cope
Dristan	Duragesic Tablets	Darvon
Empirin	Excedrin	Ecotrin
4-Way Cold Tabs	Ibuprofen	Fiorinal
Midol	Motrin	Indocin
		Nardil

Naprosyn	Norgesic Tablets	Pepto Bismol
Percodan	Plavix	Phenergan
Robaxisol	Sine-Aid	Sine-Off
Talwin	Tolectin	Zactrin
Trigesic	Vanquish	Zoma

Discontinue the following herbal supplements because they may enhance bleeding and interact with anticoagulation medicines that you may receive following your surgery:

Dong Quai (Angelica)	Ginkgo
Garlic	Ginseng
Ginger	St. John's Wort

Ephedra (contained in Ephedrine) may interact with general anesthesia.

### **The Day Before Your Surgery**

On the day before your surgery, make sure to follow these specific instructions:

- Shower and wash your body thoroughly. Some surgeons may give you a special soap to use the day before surgery. Remove all makeup and nail polish.
- Follow the instructions you received at your pre-admission visit about all your medications. You may be instructed by Anesthesia to take a different dose on that day. If you are a diabetic, do not take insulin or diabetic pills the morning of your surgery unless instructed to by Anesthesia.
- Confirm your surgery time by calling the Admitting Office of the hospital you are going to between 2 and 4 p.m. Monday through Friday, on the last business day before your surgery.
- Confirm with your surgeon how your family will be notified after the surgery is over, for example, at home or in the family waiting area of the hospital.
- Confirm your discharge plans with your family and friends.
- Do whatever activity feels comfortable. There are no general rules that you rest or limit your activity the day before surgery.
- **Do not eat or drink after midnight.**

## **What To Take To The Hospital**

- All medications, including asthma inhalers and any eye drops
- Essentials such as toiletries, short robe, and flat comfortable shoes for working with the physical therapist
- Health insurance card and a piece of identification
- Glasses for reading (leave contact lenses at home)
- You may want to bring a prepaid phone card to use for long distance calls
- Limited amount of cash-no more than \$10-in case you want to buy newspapers or magazines
- Crutches or walker if you have them

Leave your pocketbook, wallet and all valuables, including watches, earrings and other jewelry at home.

#### **4. THE DAY OF SURGERY (Day 0)**

You will most likely be admitted to the hospital on the day of your surgery. After admission, a member of the Anesthesia team will confirm the type of anesthesia you will receive. It is important that you did not eat or drink anything after midnight on the night before your surgery.

##### **Arriving at the Hospital**

- Arrive at the Admitting Office 2 hours before surgery.
- If you have family or friends who are staying for the day, they should park in one of the hospital garages or use the valet parking service if available.

##### **Going to Surgery**

- After checking in at the Admitting Office, you will be taken to the pre-operative holding area. Your belongings will be stored and delivered to your room later in the day.
- In the pre-operative holding area, an intravenous (IV) tube will be placed in your arm so that you can receive necessary medications. A catheter (small tube) will be placed in your bladder to keep track of fluids during surgery. Your family is welcome to stay with you until it is time for you to go to the operating room (OR).
- When you are taken to the OR, your family will be directed to the family waiting area in your hospital where they can wait during your surgery.
- In the OR, the surgical team will work to ensure your procedure goes as smoothly as possible. They will be continuously watching your heart rate, blood pressure and breathing. Someone from Anesthesia will be with you at all times.
- Your surgeon will notify your family at the end of your surgery.

##### **After Surgery- in the Recovery Room**

Immediately after surgery, you will wake up in your bed in the recovery room or post-anesthesia care unit (PACU). You may not remember much of this part of your stay. Here are some of the routine activities that will be happening as you wake up from your surgery.

- You will be wearing elastic stockings and may be wearing compression boots to promote circulation. Compression boots are plastic wraps that are placed on your legs. The wraps are attached to a machine that automatically inflates and deflates.
- Your nurse will be checking your abdomen for the presence of bowel sounds, which will let your nurse know when you can start taking ice chips.
- Your nurse will check to make sure you are as comfortable as possible. The nurse will frequently ask you to rate your pain using a pain scale from 0 to 10, with 0 being no pain and 10 being severe pain.
- Your pain will be managed in one of several ways:
  - ☐ Patient controlled analgesia (PCA)-a pump that releases pain medication through your IV that is controlled by your pushing the buttons to release a dose. The pump is designed so that it will not administer an overdose.
  - ☐ Epidural catheter-continuous pain medication that is given through a small tube or catheter in your back.
  - ☐ Narcotic pain medications taken by injection or by mouth.
- Your nurse will check the drainage from your incision and the catheter (tube) from your bladder. The nurse will also check on IV fluids, antibiotics, and pain medication you receive.
- You will be asked to cough and breathe deeply every hour while you are awake, and use an incentive spirometer. This is a glass cylinder with a tube that you will blow into to expand your lungs. It is used to prevent pneumonia.
- You will need to help the nursing staff when they move you in bed.

### **From Recovery Room (PACU) to Your Hospital Room**

During your recovery from surgery, the focus of your care will be on managing your pain, caring for your incision, and keeping your new joint safe.

- **Managing your pain.** When you go to a regular hospital room, for at least the first 24 hours, you will likely continue with the same method of pain control that was started in the recovery room. Pain and discomfort are expected after joint replacement surgery. The hospital staff will make every effort to reduce your pain to a comfortable level. If you ever feel that your pain is not well controlled, you should tell your nurse as soon as possible.

In the recovery room after surgery, the staff will begin one of several pain treatments. The patient controlled analgesia (PCA) pump is a system that you control with your hand to deliver pain medication through your IV line. When you feel the pain building up, you can give yourself a dose of pain medication by

pushing the button that controls the pump. At night, the pump will be set to automatically deliver a safe dose while you sleep. In all cases, the pump is set with limits that prevent an overdose. Pain medication can also be taken by mouth. Both narcotic and non-narcotic medications can be taken this way.

Keep in mind that it is important to take pain medicine when you are having pain. You should feel comfortable asking for strong pain medicine, like narcotics, for severe pain, and non-narcotic medicine like acetaminophen (Tylenol) or ibuprofen (Advil or Motrin) for mild or moderate pain. This will help you get up and move around more quickly.

- **Care of your incision.** Your incision will be covered with a bandage (dressing) for the first few days after surgery. While in the hospital, the nurses will check your incision on a daily basis and change your bandage as needed. They will also show you how to care for your incision at home. A small tube called a drain may be used to remove fluid from the surgical site. Your surgeon will remove the drain on the day after surgery.
- **Keeping your new joint safe.** Proper positioning in bed is very important for the safety and recovery of your new joint. Your nurse and physical therapist will teach you how to protect your joint when in bed and moving around. These positions will be reviewed with you each day.
  - o If **you have a knee replacement**, your leg may be in a splint with a towel rolled under your ankle or heel, or placed in a continuous passive motion (CPM) machine. This device gently bends and straightens your knee.
  - o If **you have a hip replacement**, your operative leg will be supported using sling suspension or an abductor pillow. This is a special pillow that keeps your legs apart.

Patients who have a **hip replacement** need to pay special attention to their positions to prevent dislocation of the new hip. In general, you will need to avoid bending too much at the hip for the first 6 months. For example, observe the following:

- o Avoid low chairs and furniture. If possible, use a chair that has arms that will help you get up to a standing position. An elevated toilet seat may also be helpful.
- o When sitting, do not cross your legs.
- o If you must reach to the floor when seated, always reach between your legs, not to the outside.

There are also more specific instructions your surgeon may give you:

- o If the approach to surgery was from the front of your hip, you need to avoid outward rotation of your hip, that is, pointing your toe outward. You will also be advised to avoid excessive extension such as lying on your abdomen.
- o If the approach was from the back, you need to avoid inward rotation of your hip, that is, pointing your toe inward. You will also be advised to avoid flexing (bending) at the hip more than 90°.

Follow these instructions very carefully for the first 6 months. You should be cautious about extreme positions of your hip forever. Be sure to ask your surgeon about the approach used for your surgery and the precautions that are specific to you.

## **What to Watch For When You Leave the Hospital**

Any of the signals listed below can be of concern. Call your surgeon if you have any of them when you go home. When you leave the hospital, you also should be in touch with your primary care doctor. He/she will be responsible for reviewing your current medicines and continuing to manage your ongoing health problems.

- Temperature greater than 100.5°
- Signs of infection (redness, swelling, draining wound, increasing pain)
- Arm or leg calf tenderness or pain
- Chest pain, shortness of breath, rapid heart beat
- Nausea and vomiting
- Cut that does not stop bleeding
- Unusual weight gain or loss
- Bruising easily
- Blood in stool or urine
- Black, tarry stool
- Sudden weakness or numbness of face, arm or leg on one side of body
- Sudden trouble seeing clearly
- Loss of speech or trouble talking
- Sudden, severe headache with no known cause
- Swelling in either leg that does not decrease when your leg is elevated for a few hours or overnight. It is common to have swelling of the lower leg that decreases each morning after you have been in bed all night. You should continue to wear your elastic stockings when you are out of bed for at least 2 weeks after discharge or until your surgeon discontinues them

Even long after your surgery, any one of these signs and symptoms can be a signal of a serious health problem. Be sure to contact a health care provider.

### **Especially for hip replacement patients:**

If you have sudden pain, are unable to walk or have weakness in your leg, or if you hear a popping sound, you may have dislocated your new joint. You will need to report to the nearest emergency department to have it relocated. The Emergency Department will notify your surgeon.

## 6. Leaving The Hospital

Leaving the hospital can sometimes be scary because your recovery is not complete. But you should be confident that recovery will happen, even though it will take some time. Some days you will feel that you have made great progress. Some days will be harder.

In general, the guidelines below will apply whether you are going directly home or to an extended care facility. Your health care team may also provide you with some additional instructions depending on the type of surgery and other specific needs.

In the first week after leaving the hospital, please follow these daily guidelines:

- Take all your medicines.
- If you had a hip replacement, maintain your hip precautions.
- Continue your exercise routine on your own or with a physical therapist.
- Take pain medicine as needed, especially before exercising.
- Follow instructions for wound care.
- Drink plenty of liquids and eat healthy foods.
- If you are on anticoagulation medicine, your blood tests will be done as ordered by your physician. You will need to take the medication and have blood tests for 3 to 6 weeks after your surgery.
- Because it is common to be somewhat anemic after joint replacement surgery, daily doses of iron are commonly used to build up the blood.

When you first leave the hospital, the focus of the first few weeks is on helping you become mobile and keeping your joint safe. Getting back on your feet with a new joint means getting stronger, building endurance and learning balance. As you regain your strength and endurance, the focus will shift to getting back to all of your usual daily activities. If you have any doubts or questions during this period, do not hesitate to call your surgeon.

If you have other health problems that need to be checked during recovery, you will probably go to an extended care facility after you leave the hospital. Within the first week of your stay at this facility, you and your family will meet with the staff to talk about your home and what you expect to be able to do at the time of your discharge, especially if you live alone. An important part of this evaluation is done by the physical and occupational therapists. A lot of time is spent on exercise to build your strength and endurance. You will be putting only partial weight on your new joint for the first 3 to 6 weeks, depending on circumstances. You will be using crutches or a walker for 4 to 6 weeks so you can learn to balance with your new joint and develop a normal walk.

When you are discharged from the extended care facility, be sure to schedule an appointment with your surgeon and primary care doctor. If possible, ask for a copy of your summary. Or be sure that a copy of your summary is sent to your surgeon and primary care doctor.

## **7. ON YOUR OWN AT HOME**

Once you are finally at home, whether from the initial stay in the hospital or another facility, your daily routine will include managing pain, caring for your incision and joint, and getting back to usual activities. There is no easy recipe for how to proceed. But we offer the following guidelines to help you in each of these areas.

### **Managing Your Pain**

You have a major role in managing your pain. You will have a prescription for a narcotic pain medicine. Remember to check the instructions on the bottle. To help you progress, it is important that you use it. Every patient has different needs for pain. Make sure that the dose you are taking allows you to move around and exercise comfortably. If for some reason, you have a side effect such as nausea or lightheadedness, contact your surgeon. Narcotic pain medicines are constipating. A stool softener or mild laxative will be helpful.

It is expected that each day during your recovery, you will need less and less pain medicine. Often, patients are able to stop taking narcotic pain medicine and change to acetaminophen (e.g., extra-strength Tylenol®). You can take 1000 milligrams (usually 2 tablets) every 6 hours, then gradually decrease your use of acetaminophen by increasing the time between doses until you no longer need pain medicine. You should regulate the amount of medicine you take, depending on the amount of your pain.

### **Caring for Your Incision**

Look at your incision carefully at least once every day. Check for signs of infection such as drainage, swelling and redness. If your incision does not have any open areas, clean the incision with a mild soap and warm tap water or hydrogen peroxide. Be sure to use a clean washcloth and towel. Pat it dry with a clean towel, but do not rub the incision area. Make sure it is completely dry before putting on clothes.

If you had knee replacement surgery, you should continue to wear a knee splint at night as instructed by your surgeon. If your incision is open, you should keep it covered with a dry sterile bandage. Your surgeon will advise you when you can shower.

### **Protecting Your Joint from Infection**

After joint replacement surgery, it is possible for your new joint to become infected. An infection in one part of your body can travel in your blood and possibly spread to your new joint.

- **Urinary tract infections.** Symptoms of a urinary tract infection include a frequent and urgent need to pass urine, pain in your lower back or lower pelvic region, cloudy, foul-smelling urine, chills or fever, lack of energy or appetite, or sand-like material in your urine. If you have any of these symptoms, you should report them immediately to your primary care doctor.
- **Skin infections.** Injuries to your skin should receive prompt care. After an injury, you should apply pressure to stop the bleeding, wash the area with soap and water, and apply a bandage. Serious cuts may require stitches, so you should call your primary care doctor if you have any questions. If an injury develops drainage, enlargement, blistering, swelling or redness, or if you develop a temperature, you should call your primary care physician immediately.
- **Dental infections.** Good dental hygiene is important. You should see your dentist regularly for dental care even if you are not having any dental problems. When you see your dentist, be sure to inform him or her that you have had joint replacement surgery. Avoiding bacterial contamination and infection should help reduce the risk of infection at the site of your total joint replacement.

**Immediate treatment of any infection is essential. Call your primary care doctor, dentist or surgeon if you think you may be at risk for an infection.**

If you have a dental or surgical procedure for which the surgeon or dentist feels it is possible that you may get an infection, you should take antibiotics before the procedure. The dentist or surgeon performing the procedure can prescribe an appropriate antibiotic.

### **Getting Back to Your Usual Activities**

During the first few weeks at home, you can adapt what you learned at the hospital to your own setting. You should continue doing the exercises you already know and add new ones provided by your physical therapist to increase your flexibility and ability to walk farther. Your family and friends can help you go about your activities without hurting yourself. Staff from a home care agency, such as a nurse or physical therapist, may visit you as you make the transition to home.

Most people feel very tired when they leave the hospital. In fact, you can almost count on feeling more tired than you can imagine. Even when you are told you can resume normal activities, you may not feel up to it. For this reason, it is best to pace yourself as you return to your usual daily routine. If you feel tired, take a short morning or afternoon nap. As you recover, your energy will increase.

The following are some common daily activities listed by how much work or energy they require. Those farther down the list are harder. These guidelines and suggestions are based on our experience. We encourage you to discuss each item below with your nurses and surgeon to get information specific to your situation.

- **Taking a tub bath.** If you have had a hip replacement, do not take a tub bath until you have discussed it with your doctor at your first outpatient visit. If you have had a knee replacement, do not take a tub bath until your incision has healed completely and your stitches have been removed. This may take at least 2 weeks or more.
- **Taking a shower.** Your surgeon can advise you when showering is permitted, usually at least 1 full week after surgery. You may gently wash away dried material from around the incision; be sure to dry the incision completely by gently patting instead of rubbing.
- **Sitting.** If you have had a hip replacement, do not sit for more than 2 hours at a time, as it will cause fluid to build up and swelling in your legs. Get up, take a walk, then elevate your legs for a while. If you have had a knee replacement, there are no restrictions with sitting.
- **Climbing stairs.** Please use caution when climbing stairs. Avoid going up and down stairs until your strength and balance have returned. Be sure to use your crutches and stair railings when climbing any number of stairs.
- **Lifting.** For 6 weeks after surgery, avoid lifting more than 5 to 10 pounds (this is about the weight of a bag of groceries). Your inner tissues and muscles require this time to regain their usual strength.
- **Walking, Exercising.** Your surgeon will advise you about how long you will need to use a walker or crutches for support. Pace yourself and do not allow yourself to become fatigued or overly tired. Based on your progress, your surgeon may instruct you to walk with a cane after 6 weeks. Some patients progress to just one crutch for a couple of weeks before starting with a cane. Depending on your surgeon's advice, it may be possible to walk without support after 12 weeks. Talk with your doctor when you feel comfortable and ready to start light exercise. Swimming and moderate exercise are generally fine after 4 to 6 weeks.
- **Sexual activity.** You may resume after 2 to 4 weeks and when you feel comfortable, unless your surgeon has instructed otherwise. Often your surgeon will have special information for you.
- **Driving.** Do not drive for 4 to 6 weeks or until you are walking with a cane. Do not drive until you have completely stopped taking pain medicine. You must be able to respond quickly in an emergency without hesitation. Your ability to react should not be limited by incision pain, weakness, fatigue or drowsiness.
- **Returning to work.** This depends on your type of work. You may return to work after your first visit with your surgeon (or earlier, if previously discussed).
- **Housework.** Give yourself permission not to do housework for a while.

- **Travel.** You may go outside, but avoid long distance travel for 4 to 6 weeks or until after seeing your surgeon at your next visit (unless previously discussed).

It is important that you remember to vary your activities during your recovery. Initially, it is common to feel tired and weak when you return home. Often, this is related to a low blood count. Be sure to eat a variety of foods that are high in iron so you can build up your blood count. A multivitamin pill with iron will help. Iron-rich foods include:

- ☐ Fresh and dried fruits and prune juice
- ☐ Spinach and other leafy green vegetables
- ☐ Legumes such as garbanzo beans (chickpeas) and pinto beans
- ☐ Whole grain and enriched bread and cereals
- ☐ Lean meats and egg yolks

## **8. SUPPORT INFORMATION FOR CAREGIVERS**

Family members and friends also face many challenges as they try to be available to help you through recovery. This section has been prepared for them. Each person's situation and hospital course will be different. But here are some helpful hints from our past patients and their family members.

### **While Spending Time at the Hospital**

•**Keeping track of details.** Many people will be involved in the care of your loved one. It may be difficult to meet or contact them with questions you might have. Here are some suggestions:

O Keep a list of names of key medical and support people you meet, including phone and pager numbers. Ask for their business cards and make notes to yourself on the back (for example, what the person does, and when they are available, etc.).

O Write down any questions you have for doctors or other care providers. Keep a notebook handy to jot them down whenever you think of them. Every question is important. If something is on your mind or you don't understand something, please ASK. Be open and let us know your needs.

O Look for and use all the patient education material that is available. There are many libraries and resource centers located throughout the Partners hospitals.

O Write down information about your friend or family member's condition or answers to your questions as soon as possible. It is likely that other people will be asking *you* questions. Referring to your own notes will be helpful.

O If possible, name one person who can give updates on the patient's condition to other family members. Give this person a list of important people and phone numbers to call with information.

o Carry an appointment book or calendar with you to the hospital.

- **Preventing complications.** Patients and family members can do a lot to help the patient prevent complications while in the hospital. The most common problems we see are related to falls and other health problems. Here are a few tips about what you can do:

- **Preventing falls.** Reminding patients that they are in the hospital and should ask for help getting around is an important way to prevent falls. It is not uncommon for patients to be unsteady during their hospital stay, either due to their illness, medicines or a long period without food or drink due to preparation for procedures and tests. It can also be an unfamiliar place to move around- especially if one awakens at night. Side rails or restraints may be used as safety precautions. We encourage patients to ask for help when needed to prevent unnecessary falls.

**Reducing the risk of other health problems.** Helping patients get up and around is an important way to prevent blood clots or pneumonia that can occur when in bed for too long. Even when one is not feeling well, the staff will encourage patients to move around and get out of bed as much as is safely possible. You may need to encourage the patient to take their pain medicine. Be sure to talk with the nurses or doctors if you think that pain and discomfort is keeping the patient from moving around as much as they can.

- **Keeping the patient's spirits up.** During any hospital stay or recovery period, patients and family members may find it difficult to see progress. Some days will bring great progress. Other days will be slow and even tedious. Here are some suggestions for dealing with this:

- o Feel free to bring in large photographs of children, favorite people and places that can be seen from the patient's bed. Photos help to stimulate conversation that goes beyond the medical issues. This can serve as a warm reminder of life beyond the hospital stay.
- o If important events or holidays occur during recovery, ask someone to videotape and photograph them for you to share. The patient may not want to see them now, but later will be important and special.
- o Consider bringing or sending different types of gifts such as books, magazines, puzzles or COs.
- o If others ask you about how they can help, you might suggest they volunteer rides to the hospital. This may be very helpful for family and friends who find it difficult to visit the patient.

## While You Are Home

Below are several suggestions for managing the daily routines that may be disrupted during your friend or family member's hospital stay.

- **Delegate.** You cannot do everything yourself. Try to be as easy on yourself as possible. Don't be afraid to ask for help with daily tasks such as paying bills, grocery shopping, babysitting, laundry and housecleaning. Make a list of these tasks and see if a family member, neighbor or friend will help. When someone calls to ask if there is anything they can do, refer to your list. If they are not able to do the task, perhaps they can find someone who can.
- **Keep all incoming mail in one place in your home.** Prioritize bills and pay the most important ones first, such as mortgage/rent, health insurance and utilities. It may be helpful to write on your calendar due dates for important bills.

You may get a lot of cards or letters for the patient. Save them together with envelopes for return addresses. If you receive gifts, have someone else respond with a note or phone call on your behalf.

- **Keep a notebook.** Place a notebook or pad by the telephone to write down messages. Note the date of each call. Remember, you do not have to-and sometimes cannot-return all calls.
- **Simplify.** Make a grocery list of all your usual food, beverage and household items, including brand names and size of containers. Add any convenience or frozen foods that will be helpful now. Try to think of special treats for yourself and your family. Make copies of this list. It can be a real timesaver and can also help you remember necessary items. Take advantage of delivery and shopping services during this time.
- **Limit commitments.** When someone in the family is in the hospital or at home recovering, you are excused from doing anything that is not essential. For example, if your children are invited to a birthday party, arrange for a ride from someone you trust. See if another parent or friend will buy a small gift for your child to bring to the party.
- **Take care of yourself.** Try to find ways to be good to yourself during this time. The patient needs you to be well. And you deserve to spend whatever time you can on your own needs. You will feel torn between caring for the patient and other responsibilities at home and work. You may feel you are neglecting the patient when you are not at the hospital. You may feel you are neglecting your children or job while you are at the hospital. Think about how to balance your needs, the patient's needs and your family's needs. You may also find it helpful to talk with a counselor.

## **9. FREQUENTLY ASKED QUESTIONS AFTER JOINT REPLACEMENT**

### **What is the recovery time?**

Everyone heals from surgery at a different pace. In most cases, you will need to use a walker or crutches for at least 4 to 6 weeks after surgery. You will then be advised to use a cane outdoors and try getting around the house with no support for several weeks. It usually takes about 3 months to gradually return to normal function without using any devices. It could, however, take longer.

### **How long do I need a bandage for?**

You should use a bandage for about 1 week until your incision is closed and there is no fluid oozing from your wound. It should be changed daily to a new, dry, sterile gauze. You may continue to wear a bandage to protect the incision from the irritation of clothing or compression stockings.

### **How long should I use compression stockings (TEDS)?**

These should be used for the first few weeks in order to help reduce swelling and improve circulation. You may wear them longer, especially if you find that your ankles swell without them.

### **Should I use ice or heat?**

Ice should be used for the first several days, particularly if you have a lot of swelling or discomfort. Once the initial swelling has gone down, you may use ice and/or heat. While you are in the hospital, the staff will help you with this.

### **When can I shower (get incision wet)?**

It is usually advised that you wait 1 week after surgery before showering, or until the wound is closed. If no drainage is present at the incision, your surgeon may agree that you can shower earlier. Initially, try to keep the incision dry with a plastic wrap. If it gets wet, pat it dry.

### **How long will I be on pain medicine?**

You will need some form of pain medicine for about 2 to 3 months. At first, you will take a strong medicine, such as a narcotic, by mouth. Most people are able to stop narcotics within 1 month after surgery. You can then change to an over-the-counter pain medicine such as Tylenol, Motrin or Aleve. If you are taking Coumadin (warfarin), you should talk with your primary care doctor before making any changes in your pain medicine and avoid aspirin and aspirin products such as Motrin. Tylenol is ok if you are taking Coumadin.

### **Where will I go after my hospital stay?**

Many people are able to go home after surgery. You may go to a rehabilitation hospital or other extended care facility if you have other health conditions and live alone. Many factors will be considered in this decision including how you are feeling, who can help you with daily activities at home, and how well you can get around safely at home. Your insurance coverage will also be an important deciding factor.

**Do, I need physical therapy?**

Yes! The physical therapist plays a very important role in your recovery. You will see a physical therapist soon after your operation and throughout your stay at the hospital. If you go home, you will likely have a therapist come to visit you, usually 2 to 3 times a week. You could also be referred to an outpatient physical therapist. If you go to an extended care facility, you will receive therapy there. Your therapist will help you walk, regain motion, and build strength. Your therapist will keep your surgeon informed of your progress. A complete list of the Partners outpatient rehabilitation centers in Eastern Massachusetts is included in Section 10 of this guide.

**Can I go up and down stairs?**

Yes. Initially, you will lead with your non-operated leg when going up stairs and lead with your operated leg when going down stairs. You can use the phrase, "up with the good, down with bad" to help you remember. You will need to use crutches or a cane in one hand and the handrail with the other. As your leg gets stronger, you will be able to go up and down stairs more regularly (after about 1 month).

**What activities can I do after surgery?**

You may return to most activities when you feel up to it. You should avoid impact activities such as running, downhill skiing on expert slopes, and vigorous racquet sports such as singles tennis or squash. In addition, if you have a new hip joint, you should avoid any activity that may put your new hip at risk for dislocation.

**How long do I have to use my crutches or walker?**

Your doctor will determine when it is safe for you to bear weight on your new joint so that you may stop using your crutches or a walker. You may be advised to use a cane after you have stopped using crutches. Using crutches or a walker for a shorter period of time than suggested may cause complications.

**When can I put more weight on my leg?**

Your weight bearing status will be explained to you before you leave the hospital. If you are able to bear weight as tolerated, you can put more weight on your leg as it feels comfortable to do so. If you are considered non- or partial-weight bearing, your surgeon will evaluate you at your next appointment to determine whether it has become safe for you to bear weight. Be sure you are clear with your surgeon about this.

**Should I tell my dentist or doctor that I have had a joint replacement?**

Yes, for some procedures they will want to give you antibiotics to prevent infection of your new joint. Usually this is done for the first 2 years after surgery. Check with your surgeon before stopping this practice.

**What exercises should I do?**

You will be instructed by your physical therapist on appropriate exercises and given a list to follow. In general, swimming and a stationary bicycle are good exercise options. Be sure to talk with your surgeon and your therapist about when you can begin these activities. These exercises will help you stay fit and should be continued even after your recovery is complete.

**Can I use weights?**

Generally, we do not advise using weights for at least the first 2 months. However, everyone's strength is different. Talk with your physical therapist about when would be the right time to start using weights. Use light weights to begin with and gradually progress from 1 pound to a maximum of 5 pounds.

**Can I have sex?**

For the most part, you can gradually resume sexual activity when you are comfortable. Patients who have a new hip joint should wait several weeks to reduce the risk of dislocating the hip. Be sure to follow the joint precautions your surgeon has given you.

**Can I kneel?**

After 6 weeks, you can try. Touch down with your operative knee or leg first. To get up, use your non-operative leg to take the weight off your operative knee or leg. Patients with new knee joints may want to wait as long as 8 weeks before trying to kneel. Although this may be uncomfortable at first, the knee will not be injured. Most people find the more you kneel, the easier it gets. Again, be sure to talk with your therapist or surgeon if you are worried about this.

**When can I drive?**

You should not drive until you can manage your pain without narcotics. You should also be able to move your legs freely without crutches before driving. If you had surgery on your right side, you should not drive for at least 4-6 weeks. After 1 month, you may return to driving, as you feel comfortable. If you had surgery on your left side, you may return to driving, as you feel comfortable, as long as you have an automatic transmission.

**When can I return to work?**

This depends on the type of work. You may return to work after about 1 month if your work involves mostly sitting. If your work is more rigorous, you may require up to 3 months before you can return to full work. In some cases, more time may be needed.

**When can I travel?**

You may travel as soon as you feel comfortable, but avoid long distance travel for 4 to 6 weeks or until after seeing your surgeon. We advise you to get up to stretch or walk at least once an hour when taking long trips. This is important to help prevent blood clots.

### **Will I set off the machines at airport security? Do I need a doctor's note about my surgery?**

The increasing sensitivity of security detectors at airports and public buildings may cause your prosthesis to trigger an alert. We recommend you obtain a medic alert bracelet that indicates you have had a joint replacement. Your doctor can also give you a card that explains the device so you will not be delayed or embarrassed in these situations. Security guards may also move a wand up and down your hip and leg that locates your joint replacement. They will also pad you down on the area that triggers the wand.

### **How long will I be on a "blood thinner"?**

Usually, you will be on Coumadin (warfarin) to help prevent blood clots. You will start on Coumadin the night before surgery and continue while you are in the hospital. You might stay on Coumadin for as long as 4 to 6 weeks or switch to aspirin. This will be decided before your discharge from the hospital. If you are on aspirin, you will be on this for 12 weeks. You may consider talking to your primary care doctor about the benefits of continuing aspirin after 12 weeks.

### **How long should I take iron supplements?**

Four weeks is usually enough to build up blood after surgery.

### **What should I do about constipation after surgery?**

It is very common to have constipation after surgery, especially when taking narcotic pain medicine. A simple over-the-counter stool softener (such as Colace) is the best way to prevent this problem. Increasing fruits and vegetables in your diet will also help. In rare instances, you may require a suppository or enema.

### **Can I drink alcohol?**

Alcohol use is not advised until you have stopped your narcotic pain medicine and are walking steadily.

### **I feel depressed-is this normal?**

It is common to have feelings of depression or trouble sleeping after your surgery. This may be due to a variety of factors such as difficulty getting around, discomfort, or increased dependency on others. These feelings will typically fade as you begin to return to your regular activities. If they continue, consult your primary care doctor.

### **When do I need to follow-up with my surgeon?**

Follow-up appointments are usually made after surgery at 4 to 6 weeks, 6 months, 1 year, 2 years, 5 years, 7 years and 10 years. Check with your surgeon

### **I think my leg lengths are different, what should I do?**

After surgery, it is common to feel as though your leg lengths are different. At surgery, leg lengths are checked very carefully and every attempt is made to make them as equal as possible. Sometimes, the new hip has to be lengthened in order to obtain proper muscle tension to help avoid hip dislocation. With knee surgery, differences in leg lengths are less common but can occur. This depends on how severe the knee deformity was before surgery. We advise patients to wait 3 months before making any final judgments. The body and its muscles take time to adjust to a new

joint. In some cases, a shoe lift may be prescribed for a true difference in leg lengths. In most cases, however, no treatment is necessary.

### **How long will my joint replacement last?**

This varies from patient to patient. For each year after your surgery, you have a 1% chance of requiring additional surgery. For example, at 10 years after surgery, there is a 90% success rate.

## **Frequently Asked Questions After Total KNEE Replacement**

### **When do my stitches come out?**

The stitches are usually removed about 10 to 14 days after surgery. This is usually done by your surgeon, the staff at the rehabilitation hospital or extended care facility, or a visiting nurse if you are at home.

### **When and for how long should I wear the knee splint?**

A knee splint should be worn to keep your knee straight when you are not using a CPM machine or doing physical therapy. It should be worn until you are able to do a straight leg raise on your own. Most patients only use this for about 1 week after surgery. You may also use it at night, if you prefer, for several weeks. If you have trouble getting your knee completely straight, continued use of the knee splint may be helpful.

### **When can I immerse my knee in water (e.g. bath, swimming pool, ocean, hot tub)?**

You can place your knee in water after your incision is healed usually a few days after your stitches have been removed.

### **How often should I use the CPM (continuous passive motion) machine? What settings should I use?**

Not all patients will be provided with a CPM machine. If you have one, use it about 6 hours per day. This may be divided any way you wish. For example, you can use it 3 times a day for 2 hours. The setting for flexion (bending the knee) can be increased daily as tolerated. This program may change over time depending on the advice of your surgeon or therapist.

### **What are good positions for my knee? What positions should I avoid?**

You should spend some time each day working on straightening your knee (extension) as well as bending your knee (flexion). A good way to work on extension is to place a towel roll underneath your ankle when you are lying down. A good way to work on flexion is to sit on a chair or stationary bicycle and bend your knee. Avoid using a pillow or towel roll behind the knee for any length of time.

### **How much range of motion (ROM) do I need?**

Most people require 70° of flexion (bending the knee) to walk on level ground, 90° to climb stairs, 100° to go down stairs, and 105° to get out of a low chair. Your knee should also come to within 10° of being fully straight to function well.

What should I expect for my range of motion (ROM) at 6 weeks? At 1 year? Everyone's range of motion (ROM) varies and depends on individual factors. Your potential will be determined at the time of your surgery. In most cases, you will have at least 90° of flexion and full extension by 6 weeks. At 1 year, you may have up to

125° of flexion, but 105 to 110° is considered normal. Flexion of the knee after surgery will also depend on how well you were able to move before surgery.

## Frequently Asked Questions After Total HIP Replacement

What is a dislocation of the hip and how can I prevent it?

A dislocation of the hip occurs when the femoral head (ball) comes out of the acetabulum (socket). While this risk is very small, there are things you can do to

-prevent dislocation depending on the approach used for surgery.

In general, you will want to avoid bending too much at the hip for the first 6 months. For example,

- Avoid low chairs and furniture. If possible, use a chair that has arms that will help you get up to a standing position. An elevated toilet seat may also be helpful.
- When sitting, do not cross your legs.
- If you must reach to the floor when seated, always reach between your legs, not to the outside.

Your surgeon may also give you more specific instructions:

- If the approach to surgery was from the front of your hip, you need to avoid outward rotation of your hip, that is, pointing your toe outward. You will also be advised to avoid excessive extension such as lying on your abdomen.
- If the approach was from the back, you need to avoid inward rotation of your hip, that is, pointing your toe inward. You will also be advised to avoid flexing (bending) at the hip more than 90°.

Follow these instructions very carefully for the first 6 months. You should be cautious about extreme positions of your hip forever. Be sure to ask your surgeon about the approach used for your surgery and the precautions that are specific to you.

Can I sleep on my side?

You may sleep on your operative side whenever you feel comfortable. You may sleep on your non-operative side at 4 weeks with a pillow between your knees.

**When do my stitches come out?**

If your stitches are absorbable, they do not need to be removed. The steri-strips can be kept in place until they fall off on their own. They will help keep the skin edges together. If they have not fallen off by 3 weeks, it is OK to peel them off. If your stitches are not absorbable, they are removed after 10 to 14 days.

**When can I place my hip in water (e.g. bath, swimming pool, ocean, hot tub)?** You can place your hip in water to bathe or swim after stitches have been removed or about 2 weeks after surgery if there is no drainage from your incision.

**What should I expect for my range of motion (ROM) at 6 weeks? At 1 year?** Everyone's range of motion (ROM) varies and depends on individual factors. Your potential will be determined at the time of your surgery. In most cases, you will have enough motion to put on socks and tie your shoes. Clipping toenails may be difficult.