



Patient Guide to Knee Replacement



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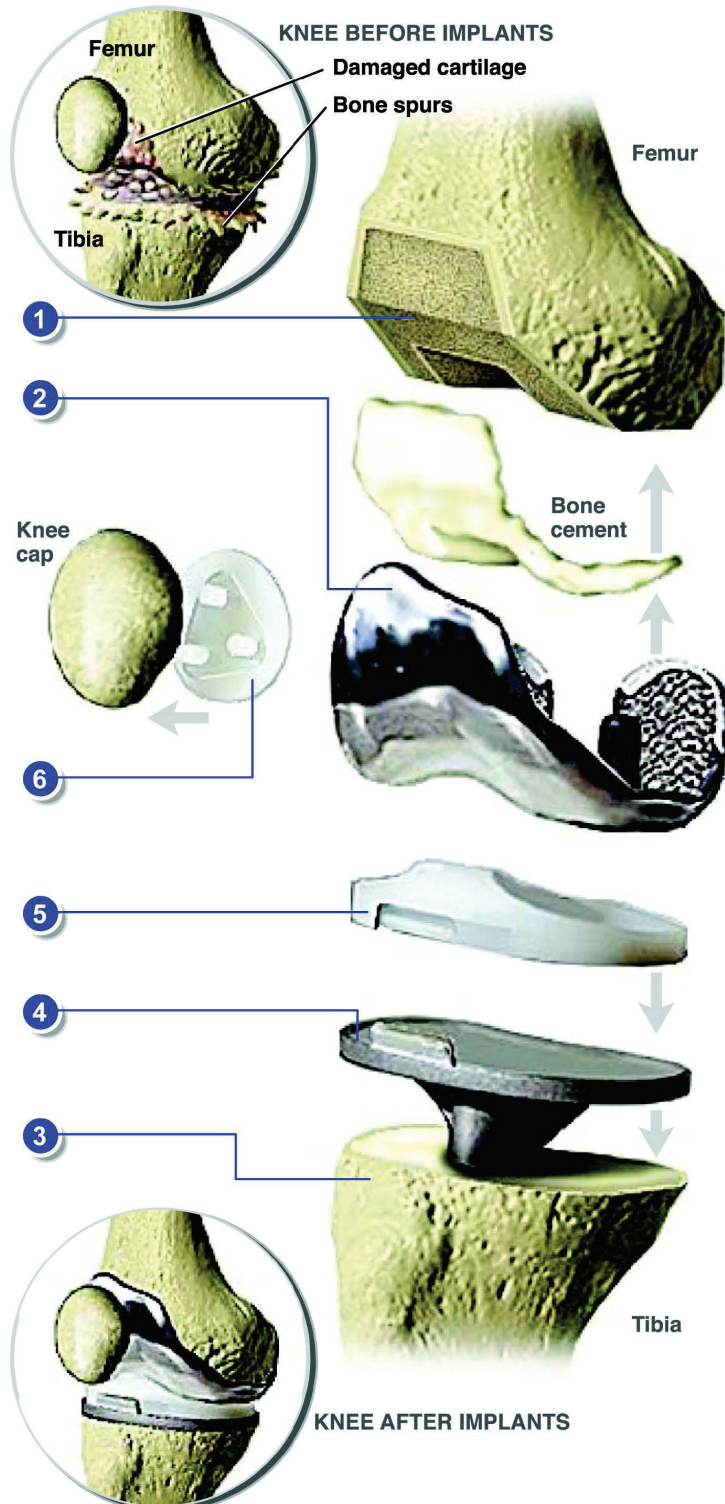
Congratulations on making the decision to regain your mobility and quality of life through total joint replacement surgery. Methodist Health System appreciates that you have entrusted your care to us. We are committed to providing quality healthcare and the information you will need to proceed with confidence.

Any surgery is a big step. The more you know, the more at ease you will feel with your decision. This patient guide will help you know what to expect — from pre-op, to the day of surgery, through your recovery.

Please read this material carefully as you prepare for surgery. You may find it helpful to use this patient guide as a checklist as you complete the necessary steps for surgery. Be sure to note any questions you may have so that you can address your concerns, hopes, and expectations with your medical team.

We are honored that you have chosen Methodist Dallas Medical Center, and we look forward to aiding you throughout your surgery and recovery.

Total Knee Replacement



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

1. Femur Reshaped

The damaged portions of the femur bone and cartilage are cut away. The end of the femur bone is reshaped to allow a metal femoral component to fit in place.

2. Metal Component Attached

A metal component is attached to the end of the femur using bone cement.

3. Tibia Reshaped

The damaged cartilage and bone are cut away from the end of the tibia. The end of the tibia is reshaped to receive the metal tibial component.

4. Tibial Component Attached

The metal tibia component is secured to the end of the tibia with bone cement.

5. Plastic Insert Attached

A polyethylene insert is attached to the metal tibial component. The insert will support the body's weight and allow the femur to glide over the tibia.

Components Joined

The tibia, with its new polyethylene surface, and the femur, with its new metal component, are put together to form a new knee joint.

6. Patella Resurfaced

To make sure the patella (the knee cap) glides smoothly over the new artificial knee, its rear surface is prepared to receive a polyethylene plastic component. The component is cemented into place.

End of Procedure

The new parts of the knee joint are tested by flexing and extending the knee.

What is total joint replacement?

When a joint has worn to the point it no longer does its job, an artificial joint, or prosthesis, made of metal, ceramics, and plastics can take its place. Total joint replacement surgery re-creates the normal function of the joint, relieving discomfort and allowing you to significantly increase activity and mobility.

Which preoperative tests are required?

All patients are required to have routine blood work within 14 days before surgery, and your surgeon must perform a physical examination within 30 days of surgery. Patients over age 50 and those with a history of cardiac or respiratory diseases may be asked to have an EKG and chest X-ray prior to surgery.

How long will a replacement joint last?

The approximate life span of a hip replacement is 15 to 20 years. Leading a healthy and active lifestyle with proper weight management can prolong the life of your new joint. There is no guarantee; some joints may not last the full 20 years. A revision or second replacement may be necessary.

Should I start or stop any medications?

- **Stop taking blood thinners and anti-inflammatory medications containing aspirin or ibuprofen within one week before surgery unless permitted by your physician. Most herbal supplements should also be stopped.**
- Generally, you may take most prescription medications until the day of surgery. Ask your surgeon if you should take your heart and blood pressure medications with a sip of water on the day of surgery.

Will I be in much pain after surgery?

Most patients experience mild to moderate discomfort in the days and weeks following joint replacement. However, after years of living with joint pain, most experience less pain after surgery than before, and many patients find surgery a welcome relief from chronic pain. As with any surgery, individual patient results and experiences vary. You will have pain medication available to take as needed. Make sure to talk with your doctor before surgery about your pain management options.

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Will I need someone to stay full time with me when I go home?

It is best for someone to be with you the first 24 to 72 hours after discharge. If you live alone, ask a friend or relative to stay with you. If you cannot arrange a full-time helper, perhaps a friend or neighbor can call daily to check on your progress. If you are unable to arrange for someone to help you at home and your doctor has ordered home care, depending on insurance approval our case management team can assist with the options available.

When will I be able to engage in sexual activities after surgery?

In most cases, you may resume sexual activity when you feel comfortable enough to do so. Make sure to heed any position restrictions recommended by your healthcare team. In general, most patients resume normal sexual activities within four to six weeks after surgery.

Will I have to pay any copays to the hospital or surgeon?

Depending on your insurance coverage, you will likely be responsible for copays to the hospital and to your surgeon. Our financial counselors can help you determine what your hospital copay will be and arrange for a payment plan. They can be reached at 214-947-3491 or 214-947-3422. Call your insurance company or surgeon's office for an estimate of the physician copay.

The complication rate following joint replacement surgery is very low. Serious complications, such as joint infection, occur in less than 1 percent of patients. Most problems can be avoided or treated if addressed early. Your surgeon will make you aware of the cautions and risks associated with your surgery, including the potential for the following conditions:

Anesthesia reaction – A very small number of patients have problems with anesthesia. Be sure to discuss your risks, concerns, or past history of complications with your anesthesiologist.

Infection – This may occur in the hospital, after you return home, or even years later. While many steps are taken to minimize the risk of infection, it can't always be avoided. You will receive antibiotics before, during, and after surgery to prevent infection, and all operating room precautionary procedures will be carefully followed.

For two years after your surgery, you will need to tell doctors about your joint replacement and take antibiotics before undergoing even minor procedures, such as dental work, to reduce the chance of an infection in another part of your body spreading to the artificial joint. If an infection does occur, your surgeon will have a protocol to manage it.

Blood clots – These may result from several factors including decreased mobility following surgery, which slows the movement of the blood. Symptoms may include a red, swollen leg, especially in the calf area, and shortness of breath. Blood clots can be prevented with:

- Blood-thinning medications (anticoagulants)
- Elastic support stockings to improve blood circulation
- Plastic foot or leg wraps that inflate to promote blood flow in your legs while in the hospital.
- Elevating the feet and legs to keep blood from pooling
- Moving toes and legs immediately after surgery
- Walking within a few hours of surgery and then as frequently as possible.

Pneumonia – There is a risk of pneumonia following major surgery. You will be assigned a series of deep-breathing exercises and instructed to use an incentive spirometer to keep your lungs clear.

START PRE-OP EXERCISES

We want you to experience the most favorable outcome from your surgery; therefore, it is important for you to be in the best-possible overall health beforehand. Increasing upper body strength is important to help you maneuver a walker or crutches after surgery, and strengthening your lower body can reduce your recovery time.

Following is a list of preoperative exercises specifically designed for knee surgery patients. You are encouraged to make these exercises part of your daily routine from now until your surgery. A 10- to 15-minute workout, twice a day, is recommended. Refer to the Exercise and Rehabilitation section for instructions on these exercises.

Pre-op Exercises

(10 to 20 reps each, twice daily)

Isometric gluteals/squeezes

Isometric quad sets

Short arc quads

Long arc quads

Ankle pumps

Heel slides

Prior to surgery, patients who smoke are advised to QUIT SMOKING in order to reduce the risk of postoperative lung problems and improve healing. Patients who are overweight may be asked to LOSE WEIGHT to help decrease stress on the new joint and reduce the risk of infection.

Nutrition for the Orthopedic Surgical Patients – Joints

Proper, healthy nutrition before and after surgery is key to healing and recovery. The body has increased nutrient needs after surgical procedures such as joint replacements or revisions. These tips will assist with healing after surgery. Protein: Protein is a particularly important nutrient during the healing process because it helps your body repair damaged tissues. The average person consumes about 55 grams of protein per day. During the healing process, the body needs additional protein. Consume at least 80 grams of protein each day for one week before and two weeks after your procedure.

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High Protein Foods:

Food	Serving	Protein (Grams)
Ground sirloin	3 oz	24
Tofu, firm	½ cup	20
Tuna fish packed in water	3 oz	20
Pork tenderloin	3 oz	18.4
Chicken breast, boneless/skinless	3 oz	13.4
Cottage cheese, low fat	½ cup	13.4
Soy milk	1 cup (8 oz)	11
Soybeans	½ cup	11
Vegetable or soy patty	1 patty	11
Pumpkin seeds	1 oz	8.5
Milk: fat free, low fat, whole	1 cup (8 oz)	8
Peanut butter, smooth or creamy	2 Tbsp	8
Yogurt	6 oz	8
Egg substitute	¼ cup	7.5
Cheese	1 slice (1 oz)	7
Kidney beans, canned	½ cup	7
Nuts: peanuts, pistachios, almonds	1 oz	6
Fish (haddock, flounder, perch, pollock)	1 oz	6.5
Egg, whole or hard-boiled	1 egg	6
Sunflower seeds	1 oz	5.5

INFORMATION FROM THE ACADEMY OF NUTRITION AND DIETETICS' NUTRITION CARE MANUAL

Water:

Dehydration can delay wound healing, so drink at least 64 ounces of water per day - this is about 4 regular size water bottles. In addition, adequate fluid intake helps prevent constipation that often results from medications used after surgery for pain control.

Fiber:

Like water, fiber also reduces likelihood of constipation. Consuming 3-4 servings of fresh fruits and vegetables will help you meet your fiber goal of 25-35 grams per day.

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High Fiber Foods:

Food	Serving	Fiber (Grams)
Bran cereal	1/3 cup	24
Cooked kidney beans	1/2 cup	7.9
Cooked lentils	1/2 cup	7.8
Cooked black beans	1/2 cup	7.6
Canned chickpeas	1/2 cup	5.3
Baked beans	1/2 cup	5.2
Pear	1	5.1
Soybeans	1/2 cup	5.1
Quinoa	1/2 cup	5
Baked sweet potato, with skin	1 medium	4.8
Baked potato, with skin	1 medium	4.4
Cooked frozen green peas	1/2 cup	4.4
Bulgur	1/2 cup	4.1
Raspberries	1/2 cup	4
Blackberries	1/2 cup	3.8
Almonds	1 oz	3.5
Apple	1 medium	3.3
Dried dates	5 pieces	3.3

INFORMATION FROM THE ACADEMY OF NUTRITION AND DIETETICS' NUTRITION CARE MANUAL

After surgery, blood sugar levels are normally higher due to stress of surgery and medications. If you are diabetic, it is especially important to maintain normal blood sugar levels. Make food choices that are consistent with diabetic diet guidelines before and after surgery. **Avoid concentrated sweets such as fruit juice, soda, honey, jelly, candy, pastries, etc.**

Note: Your doctor will help manage and treat elevated blood sugar levels while you are in the hospital in order to provide the greatest chance of healing and minimize infections

Weight Management: Maintaining a normal body weight will improve success of joint replacements or revisions. If you are overweight, following a healthy diet, setting weight loss goals, and tracking your food intake with a food journal or app will help you with weight loss.

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General, Healthful Nutrition Tips

- Eat at least 5 servings of fruits and vegetables every day. Try to consume a variety of colors of produce for additional health benefits. Each color contains different vitamins and minerals.
- Eat more whole grains and legumes (beans and lentils).
 - » Whole grains include brown and wild rice, whole grain noodles, corn, quinoa, oats, and popcorn.
- Try meatless alternatives. In place of meat you can get your protein from eating eggs, fish, poultry, beans, peas, soy-based foods (like tofu or soy milk), nuts/nut butter, and low-fat or fat-free dairy products.
- Keep your sodium intake to less than 2300 milligrams per day.
 - » Avoid adding salt to your food when cooking. Opt for a salt free seasoning or fresh herbs and spices.
 - » Eat freshly prepared meals at home. Processed foods and restaurant foods contain more salt.
 - » When shopping, choose the products with lower sodium content.
- Limit your daily sugar intake. Sugar can be found in honey, syrups, jelly, fruit juice, soda, candy, pastries. Read nutrition labels carefully to avoid products with high sugar content.
- Avoid foods with saturate and trans fats. Foods with unsaturated fats are a better option.
 - » Unsaturated fat is found in fish, avocado, nuts, and oils (sunflower, canola, and olive oil)
 - » Saturated fat is found in fatty meat, butter, ice cream, palm and coconut oil, cream, cheese, and lard.
 - » Trans fats are found in many processed foods, margarines, fried foods, fast food items, pies, cookies, and other dessert. Check nutrition labels.
 - » Boil, steam, or bake food instead of frying.

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Preparing for total joint replacement begins two weeks before the actual surgery. To ensure your surgery can be performed as scheduled, you should complete the following arrangements before being admitted to the hospital:

Get a physical exam

A physical examination is required within 30 days of your surgical date to assess your overall health and identify any medical conditions that could interfere with your surgery or recovery.

Review current medications with your primary care physician and surgeon

- **Stop taking blood thinners and anti-inflammatory medications containing aspirin or ibuprofen within one week before surgery unless permitted by your physician. Most herbal supplements should also be stopped.**
- Generally, you may take most prescription medications until the day of surgery. Ask your surgeon if you should take your heart and blood pressure medications with a sip of water on the day of surgery.

Plan rehabilitative care

For the first few weeks after surgery, you may need help at home with shopping, preparing meals, and transportation. If you are not able to arrange for a full-time helper, ask some friends, neighbors, or loved ones to check on you, help with meal preparation, and take you to your doctor's appointments. If you are unable to arrange for someone to help you at home and your doctor has ordered home care, depending upon insurance approval, our case management team can assist with the options available.

Arrange transportation to and from the hospital and outpatient therapy

Make arrangements for someone to bring you to the hospital and pick you up when you are discharged. You may also need assistance getting to and from outpatient therapy if you are not yet able to drive yourself.

Before surgery, check around your house to see if you will need to make adaptations for sitting on chairs, the sofa, your bed, the toilet, or in the car.

When you come home from the hospital, common things in your home may be dangerous. To prevent falls, you should remove or watch out for the following:

- Long electrical or telephone cords that lie across the floor
- Loose rugs or carpet
- Furniture you might trip over on stairs and in hallways
- Stacks of books, piles of magazines, and other miscellaneous items on the floor
- Pets that run in your path
- Water spills on bare floors
- Bare bathroom tile or slippery floors
- Ice or mildew on outdoor steps.

It would also help to:

- Prepare meals in advance and freeze them so they are ready when you return
- Have a chair handy in the kitchen to sit on while preparing and cooking food
- Arrange the most frequently used kitchen utensils and food on shelves and counters that can be easily reached
- Leave the most frequently used dishes in the dish rack and most frequently used foods in the most accessible cabinets
- Use a rolling cart to take food from the refrigerator to the counter and from the counter to the table
- Use a bag attached to your walker or an apron with pockets to carry small items such as glasses, books, silverware, etc.
- Attach a cup holder to your walker to carry drinks in covered cups
- Arrange for someone to care for, walk, and feed your pets.

Expect to be in the hospital from one to three days following surgery.

A CHECKLIST OF WHAT TO BRING:

Clothing

- Short gowns, pajamas, underwear, and socks
- Knee-length robe or cover-up for walking in the halls
- Exercise shoes with closed-in heel and nonslip soles
- Two days of comfortable, loose-fitting clothing that you will wear during your therapy sessions

Personal Items

- Grooming items such as shampoo, toothpaste, deodorant, brush, comb, etc.
- A walker, cane, or crutches, if you have them. Write your name on all equipment you bring to the hospital.
- Glasses, hearing aid, dentures, and any other items you use every day

Information

- List of your current medications (including prescriptions, over-the-counter drugs, and vitamin and herbal supplements) with strengths and how often you take them
- List of allergies (including medication, food, clothing, etc.) and how you react to each
- List of adaptive equipment you already have at home
- Educational materials you received in preadmission class
- Advanced directives, such as a living will or healthcare power of attorney, if you have them. Hospital personnel are required by law to ask for these when you are admitted. They will put a copy in your medical record and return the original.
- Identification card with photo
- Any co-payment required by your insurance company.

LEAVE AT HOME:

- Prescription pain medication
- Jewelry (including body piercings)
- Credit cards
- Keys
- Checkbooks
- Laptops, cell phones, and PDAs
- Radios
- Televisions
- Cash.

The Night/Morning Before Surgery

Follow all instructions provided by your physician, anesthesiologist, and the hospital, including the following:

- Notify your physician of any change in your physical condition, such as a cold, sore throat, fever, bites, or rashes.
- 8 HOURS BEFORE YOUR SURGERY:
 - DO NOT eat; smoke; chew tobacco; smoke e-cigarettes; or drink milk or cream, energy drinks, or protein shakes.
- 4 HOURS BEFORE SURGERY:
 - YOU MAY DRINK LIQUIDS: water, fruit juice as long as it is pulp-free, tea, coffee (without cream or milk), broth, honey, dark soft drinks, and ice pops. You may also have jello, sugar, and hard candy.
 - For example, if your surgery is scheduled at 7 a.m. you may have liquids until 3 a.m.
- If you have been prescribed medicines such as Celebrex® (celecoxib), Norco® (acetaminophen and hydrocodone), or Lyrica® (pregabalin) to take before arriving at the hospital, follow your doctor's instructions and take with as little water as needed.
- **Take your heart and blood pressure medications per your doctor's instructions.**
- Shower using the antiseptic solution recommended by your healthcare team the night before and the morning of surgery to reduce the risk of infection. Use a clean wash cloth and clean towel for each pre-operative shower. Be sure to apply the antiseptic soap from the neck down, staying away from genital area.
- After your preoperative showers, put on clean clothes. Do not put on any perfume, lotion, powder, after shave, cologne, or makeup. These products harbor bacteria; the point of the showers is to get the bacteria off the skin.
- Shampoo your hair, using your regular shampoo.
- Remove all nail polish.
- You may brush your teeth the morning of your surgery.
- DO NOT shave your legs within three days of surgery.
- Wear loose-fitting clothing to the hospital.
- Leave your valuables at home.

Hospital Admission

- Please arrive two hours before your scheduled surgery. Park in Pavilion II parking off Colorado Boulevard. Check in at Outpatient Services.
- The admissions clerk will check you in and give you a hospital band. You will then be taken to the pre-op area to get ready for surgery.
- The pre-op nurse will check your vital signs and verify your health information.
- You will be asked to change into a surgical gown. You must remove all personal belongings, including dentures, hearing aids, hairpins, wigs, jewelry, body piercings, glasses, contact lenses, nail polish, all underwear, and leave them with your loved ones during surgery.
- An IV (intravenous) catheter (a small tube) will be inserted into a vein in your arm for administration of anesthesia, fluids, and medications.
- There will be several checks to make sure the correct joint is being replaced. Your surgeon will review your medical history and mark the area to be operated on. The nursing staff will check the consent form you signed to make sure it agrees with the procedure on the operating room list.
- For your safety, you will be asked several times during your stay for your name and date of birth.
- The anesthesiologist and operating room nurse will introduce themselves and address any remaining questions you have about the procedure.
- Your loved ones may stay with you until you are transported to the operating room. They will then be directed to a waiting area.

Your surgery will be cancelled if you have:

- **Disregarded instructions on eating and drinking**
- **A rash; an open wound; or infected insect bites, cuts, or scrapes**
- **Not completed all of your preadmission medical tests.**

Your surgery will take one to three hours. The people who will be with you in the operating room include:

- **Orthopedic surgeon(s)** – your doctor(s) who will perform surgery
- **Physician assistant/nurse practitioner** – may assist your doctor(s)
- **Anesthesiologist** – the doctor who gives you anesthesia
- **Nurse anesthetist** – a specially trained nurse who may work with your anesthesiologist in providing your anesthesia
- **Surgical technologist** – the person who hands the doctors the tools they need during surgery
- **Radiologic technologist** – the person who provides X-rays during surgery
- **Circulating nurse** – a registered nurse who oversees the care given in the operating room and brings things to the surgical team.

You may have any of the following during surgery and recovery:

- **Intravenous tube (IV)** – This is placed in your arm and used to replace fluids lost during surgery, administer pain medicine, or deliver antibiotics and other medications. All patients will have an IV.
- **Bladder catheter** – This tube may be placed in your bladder to help your healthcare team keep up with your fluid intake and output. It is most often removed the day after surgery to lower your risk of bladder infection.
- **Wound drain tube** – This tube may be inserted near your surgical incision during surgery to help reduce blood and fluid buildup at the incision. It will be removed the next day.
- **Compression stockings and sequential compression wraps** – Compression stockings will be put on your legs to help blood flow. You may also have sequential compression foot or leg wraps that are connected to a machine that inflates them with air to promote blood flow and decrease the possibility of blood clots.

The Recovery Room

After surgery you will spend at least an hour in the recovery room. While there, nurses will closely monitor your blood pressure and heart rate as the effects of the anesthesia wear off. You will have a mask over your face giving you oxygen.

When you wake up, you will most likely be groggy from the anesthesia and pain medications that you have been given. You may notice that a large dressing has been applied to the surgical area to maintain cleanliness and absorb fluid.

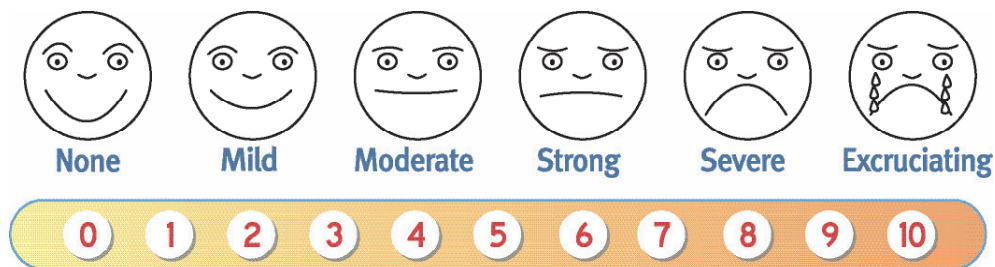
Once your surgeon and medical team determine it is safe for you to be transferred from the recovery room, you will be transported to your hospital room.

Pain Management

Your pain after surgery will be a different kind of pain. It's generally described as soreness or an ache. This pain is temporary and will improve over the course of two weeks. Be sure to talk with your doctor before surgery about your pain management options.

Pain medication is available upon request in IV or pill form. Dosages will be closely monitored and gradually reduced.

You will be asked to rate your pain using a scale of 0 to 10, with 0 meaning no pain at all and 10 meaning the worst pain imaginable. **The goal is to keep your pain rating at 5 or less.**



You cannot go home on IV pain medication as it should only be used for out-of-control pain (level 9 to 10 on the pain scale). To prevent your pain from getting out of control, stay on top of your pain pills. Ask your nurse when your last dose of pain medicine was and how often you can have it.

In addition to the general soreness of the surgical area, some patients also experience back discomfort due to lying on their backs before, during, and after surgery. You may request pain medication to help lessen your discomfort.

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How to use an incentive spirometer

Using the incentive spirometer, also called a breathing exerciser, helps you take deep breaths, and reduce your risk for pneumonia after surgery.

How to use:

1. Breathe out, and then close your lips around the mouthpiece of the spirometer.
2. Take a slow deep breath in through your mouth, like you are taking a drink of water through a straw.
3. Breathe in slowly so that the indicator (see diagram) stays between the two arrows. Breathing in too fast can make you lightheaded and dizzy.
4. As you breathe in, the piston (see diagram) will rise to show how much air you have inhaled.
5. The marker is set to your goal, which is determined by your age and height. You are working to breathe in until the piston reaches the marker.
6. When you reach the marker, hold your breath until the piston goes back down to the bottom.
7. Breathe out slowly and remove the mouthpiece from your mouth.
8. Take a few normal breaths.
9. Repeat until you have done this 10 times in a row.

Repeat

1. Every two hours, repeat steps 1-9, or use as directed by your doctor.
2. After you have finished a set of 10 breathing exercises, cough. This will help clear your lungs of mucus.
3. Store the mouthpiece in a plastic bag when not in use.

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Helpful hints

- Using your incentive spirometer at home will help keep your lungs clear while you recover. Keep it within reach so you remember how to use it every two hours.
- If you become dizzy or lightheaded, slow down your breathing and give yourself more time between exercises.

Parts of the Incentive Spirometer

1. Indicator
2. Marker
3. Piston
4. Flexible Tubing
5. Mouthpiece



Moving and Positioning

UNTIL YOU HAVE BEEN CLEARED TO MOVE INDEPENDENTLY, A STAFF MEMBER MUST HELP YOU SAFELY GET IN AND OUT OF BED AND CHANGE POSITIONS IN BED TO HELP AVOID INJURY TO THE SURGICAL AREA.

Your physician may order a leg splint called an immobilizer to keep your knee straight. It should be worn when you are out of bed or at night when you are sleeping. Make sure you avoid twisting your leg when turning in bed.

Do not lie in bed with a pillow under your knee because you may lose the ability to straighten it. **Do not** cross your operated leg over your non-operated leg.

Your nurses, physical therapists, or occupational therapists will help you practice the safest methods for:

- Sitting and rising from a chair
- Walking with a walker or crutches
- Sitting and rising from the toilet or shower
- Getting in and out of the tub
- Putting on and taking off clothing, underwear, socks, and shoes
- Getting in and out of a car
- Climbing stairs.

Breathing

After surgery, the healthcare team will remind you often to take deep breaths and cough. They will give you an incentive spirometer, a lung exercise machine that will help you take big deep breaths to prevent pneumonia. Hospital staff will encourage you to use it 10 times an hour while you are awake. Take it home with you when you are discharged and continue to use it for two weeks.

Diet

Immediately after surgery, your diet will consist of clear liquids then quickly progress to solid foods. To avoid constipation, try to:

- Eat a hot breakfast with a hot beverage daily
- Request a meal high in fiber with more fresh fruit, vegetables, whole grain cereals, and breads
- Drink at least six to eight eight-ounce glasses of water daily
- Increase physical activity as much as you can tolerate
- Limit sugar.

It is important to monitor the types of foods you consume during your recovery. Keeping your sugar intake low will decrease your risk of a postoperative infection.

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Physical Therapy

The quicker you start moving again, the sooner you will be able to regain your independence. Expect to spend a great deal of your time in the hospital exercising your new joint and continuing deep breathing exercises to prevent lung congestion.

- You will begin working with a physical therapist the day of surgery.
- As soon as you are awake from surgery and able to perform mild exercises, you will begin with easy ankle pumps, which help decrease swelling of the legs and decrease the possibility of a blood clot.
- The physical therapist will also go over other exercises and precautions for avoiding dangerous movements.
- Your physical therapist will concentrate on range of motion, including gentle movement to help you bend and straighten your knee. Other exercises will help improve knee mobility and exercise the thigh and hip muscles. Your leg may be elevated to help decrease swelling.
- Your physical therapist will help you get up for a short walk using your crutches or walker.

Weight-bearing Status

Carefully follow instructions from your doctor about how much weight you can put on your operated leg:

- **No weight bearing** – means the foot does not touch the ground
- **Touch-down weight bearing** – means the foot touches the ground for balance only
- **Partial weight bearing** – usually means the foot bears one-fourth to one-half of your body weight
- **Weight bearing as tolerated** – means bearing as much weight as is comfortable.

Special Equipment

Ask your occupational therapist to help you determine any special equipment that you may need to aid you with routine things without placing your knee in danger of dislocation. These tools include:

- Long shoehorns
- Bathtub benches and handrails
- Hand-held shower head
- Long-handled bath sponges
- Reachers.

DISCHARGE GOALS

When you are able to, independently or with minimal assistance, do the following:

- Get in and out of bed
- Walk more than 100 feet with crutches or a walker
- Go up and down stairs
- Access the bathroom
- Get in and out of the shower by yourself
- Get in and out of a chair
- Get in and out of your car
- Consistently remember to use knee safety precautions before going home.

Whether you are sent directly home or to a facility for rehabilitation will depend on your insurance, and whether your surgeon and physical therapist think you are able to care for yourself.

- **Discharge home** – You may go directly home if you have accomplished these discharge goals.
- **Discharge to a rehabilitation center** – If you have not completed each of these discharge goals, your doctor and physical therapist may recommend that you be discharged to a rehabilitation center until you are able to care for yourself at home.

CASE MANAGEMENT

The case management team will arrange home health visits, transportation to another facility, outpatient physical therapy, and ordering any equipment you will need based on your condition and doctor's orders.

Rehabilitation Services

- **Rehabilitation facilities** – Patients generally stay a short period of time and undergo aggressive therapy to build strength and mobility.
- **Skilled nursing facilities** – If you are not progressing rapidly enough in physical therapy sessions and it is unlikely you will be able to do so in a rehabilitation setting, your doctor or physical therapist may recommend a skilled nursing facility for a longer recuperation.
- **Home health** – Nurses and physical therapists that specialize in providing care at home visit you up to three times a week.

SIGNS OF COMPLICATIONS

Call your surgeon if you develop any of the following symptoms. He or she may want to see you for a follow-up exam:

- Fever over 101° Fahrenheit
- Chest congestion
- Drainage from your incision
- Redness around your incision
- Increased swelling around your incision
- Incision hot to the touch
- Dressing starts to pull away from the skin
- Large amounts of drainage form on the dressing
- Pain or swelling in your ankles, calves, or legs
- Continuous vomiting, nausea, or fainting
- Severe pain
- Inability to walk or move your leg.

The following are symptoms of pulmonary embolus (blood clot in the lung). If you experience any of these signs, call 911 for immediate attention!

- Sudden chest pain
- Difficulty breathing
- Shortness of breath
- Inappropriate and profuse sweating
- Confusion.

INCISION CARE

- Keep your dressing clean and dry.
- Your surgeon will tell you a specific day to remove your dressing.
- Your surgeon will tell you when it is okay to shower.

When it is time to remove your dressing, wash your hands with soap and water and dry thoroughly before removing your dressing. After disposing of the dressing in the trash, wash your hands again.

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CONSTIPATION GUIDELINES

A frequent side effect of anesthesia and pain medication is constipation. Narcotics not only depress your perception of pain, but also depress your colon function. Also, decreased activity after surgery may cause constipation. If you have chronic gastrointestinal conditions, please consult your primary care provider or gastroenterologist. As you need less narcotic, your activity level and walking increase, your bowel movements will become more regular and you can discontinue the above medications gradually.

It may be good to start the following regimen to prevent constipation. You can purchase these medications at your local grocery store or pharmacy over the counter.

1. **Water** - Patients should drink at least 8 glasses (64oz) of water per day.
2. **Diet** - Increasing fiber and protein can help prevent constipation and promote healing.
3. **Metamucil** - This is a fiber source. Follow the directions as indicated on the package.
4. **Milk of Magnesia** - This is a laxative for constipation. Follow directions as indicated on the package.
5. **Ducolax suppository** - If for severe constipation. Follow the directions as indicated on the package.
6. **Fleets Enema or Soap Suds Enema** - May be used if the above products are not effective. (If you have other medical conditions such as kidney issues, the Soap Suds Enema should be used)

If you have not had a bowel movement by the **morning of day two after surgery** please follow the following directions:

1. Milk of magnesia at 30mL by mouth.
2. If you have not had a bowel movement by that afternoon, then you should use a single ducolax suppository.
3. If you still haven't had a bowel movement by the morning of day three after surgery, then you will need to use a Fleets Enema or Soap Suds Enema.
4. If the above suggestions do not help and you continue to have problems, please call your surgeon's office for further advice.

THE FIRST WEEKS

When you get home, be sure to follow *Your Written Discharge Instructions* in the folder given to you at discharge.

- Check with your doctor about special precautions you must take while you are on blood-thinning medications.
- Continue taking pain medication as prescribed.
- Gradually wean yourself from prescription pain medicine to over-the-counter pain relievers as advised by your doctor.
- Use your polar ice machine to reduce swelling and pain before and after exercising.
TIP: A bag of frozen peas wrapped in a kitchen towel makes an ideal ice pack. Do not use ice more than 20 minutes at a time.
- Elevating your leg above the level of the heart helps to reduce swelling.
- Drink plenty of fluids to prevent dehydration.
- Pain medications may cause constipation.
- It is common to have trouble sleeping; however, try not to nap too much during the day.
- Wear the white compression stockings given to you in the hospital as instructed to control swelling and reduce the risk of blood clots for as long as your doctor advises.
- Continue your physical therapy exercises as instructed.
- Continue your pre surgery nutrition plan for at least 2 weeks.
- Keep your follow-up appointments with your doctor.

You may hear some clicking in your knee as it heals. This is normal. To protect your new joint, follow these precautions:

- DO NOT cross your operated leg over your non-operated leg.
- Continue to use your walker or crutches after surgery as advised by your doctor or physical therapist.

As a rule, all joint replacement patients should heed the following limitations during the first weeks after surgery:

- Expect to use a cane, crutches, or walker for several weeks.
- No kneeling, bending, or jumping for the first month.
- Do not drive until you are no longer taking prescription pain medications and your doctor says it's okay.
- Do not drink alcohol while taking pain medication.
- Do not smoke — it slows healing.
- Avoid sexual activity until you are comfortable to do so and have been cleared by your surgeon.
- Continue wearing the white compression stockings as instructed by your doctor until your return appointment.
- Shower only.
- Do not soak in a bath tub, hot tub, or swimming pool or go into a lake until your surgeon says it's okay.

HOME EXERCISE PROGRAM

When you're home, continue the exercise program begun in the hospital. Remember to:

- Review your exercise program and set up a workout plan
- Practice precautions while resuming approved activities, including safety in your home and car.

The goals for your knees are:

1. Achieve full knee extension (straight position)
2. Achieve knee bending to slightly beyond 90 degrees
3. Achieve good knee strength to eventually walk without an assistive device such as a walker or cane.

Guidelines

- Don't hold your breath during any part of an exercise activity. Exhale during the strenuous part of each repetition.
- Do each exercise at least 10 times to start with and progress up to 30 repetitions each.
- Do your program three times a day.
- Ice your knee 15 to 20 minutes before and after exercise.

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Precautions

- Do not twist or pivot your knee with a planted foot.
- Do not kneel or crawl on your knee until cleared by your physician.
- Do not do deep knee bends (greater than 90 degrees).
- Avoid any sudden knee bending.

Critical aspects for knee function

- Achieve full knee straightening
- Ability to bend the knee to 90 degrees
- Do NOT develop a knee contracture.

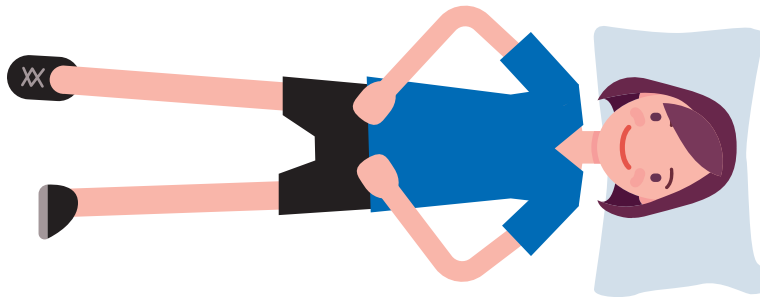
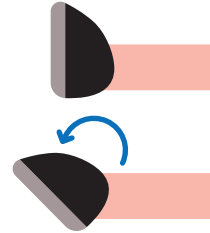
Your orthopedic surgeon and physical therapist will outline a specific exercise plan for you. The following pages illustrate some of the home exercises you'll be prescribed.

Expect to regain strength and endurance as you begin to take on more of your normal daily routine.

Exercises – Lying Down

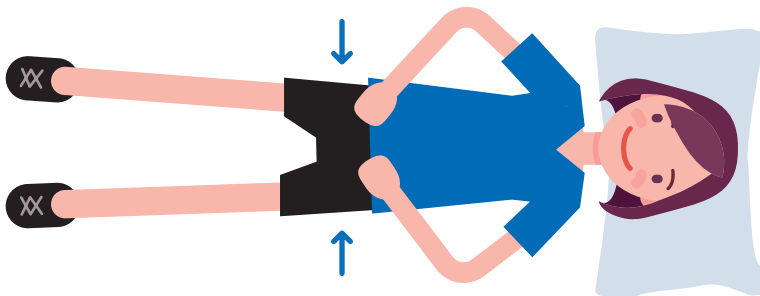
Ankle pumps

While lying on your back, bend (pump) your ankles (both feet) up and down 15 to 20 times. When you bend your feet toward your face, hold the position for 5 seconds to really feel the stretch in your calf muscles. Make sure your leg does not twist or turn while doing this exercise.



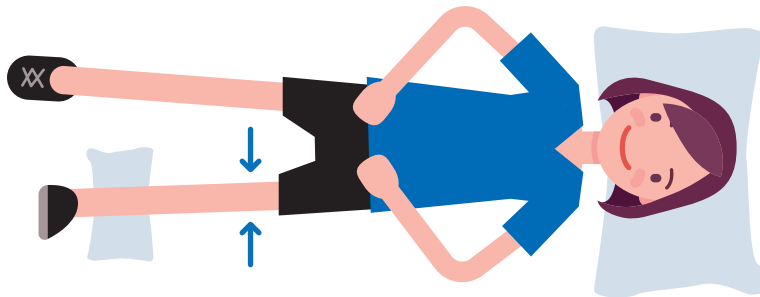
Gluteal sets

While lying on your back, tighten (squeeze) your buttock muscles together. Hold for 5 seconds. Relax and repeat.



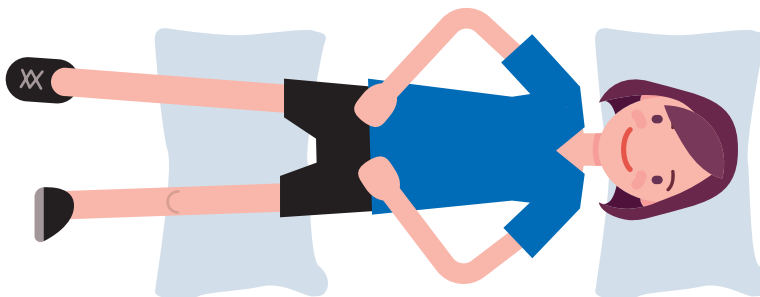
Quadriceps sets

While lying on your back, straighten your knees by contracting (tightening) your thigh muscles. Hold for 5 seconds. Relax and repeat.



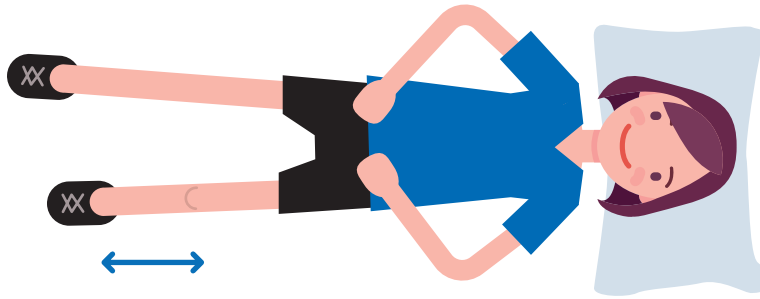
Knee short arc quads

While lying on your back with your knee bent over a pillow or bolster, straighten your knee. Hold for 5 seconds. Relax and repeat. Do not lift your knee off the pillow or bolster.



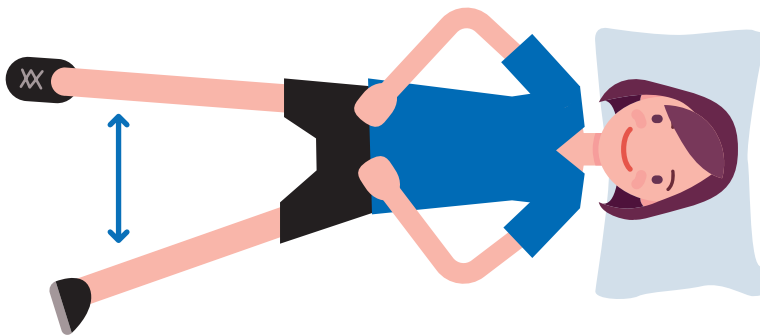
Heel slides

While lying on your back, slide your heel toward your buttocks, bending at the hip and knee. Relax and repeat.



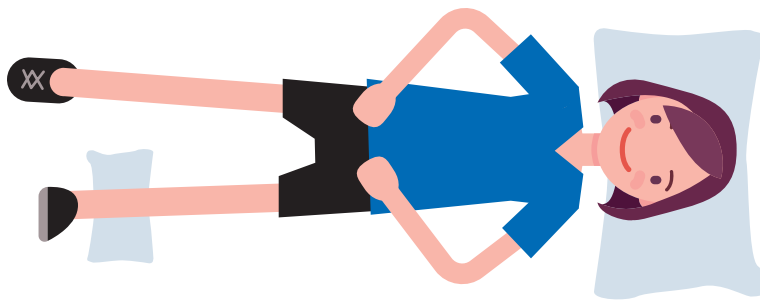
Supine hip abduction

While lying on your back, slide one leg out to the side while keeping the knee straight and toes/foot pointed up at the ceiling. Return to the start position and repeat.



Straight leg raises

While lying on your back, slowly lift one leg 6 to 12 inches from the bed while keeping the knee straight at all times. Hold for 5 seconds. Relax and repeat. To give support to your back while you raise your leg, you can bend your other leg and place your foot on the bed.



Exercises – Sitting

Knee long arc quads

Sitting in an armchair, lift one foot until the knee is straight. Hold for 5 seconds. Return to the starting position and repeat. Do one leg at a time.



Knee bending under chair

Sitting in an armchair, slowly slide your foot underneath the chair to promote bending at your knee. Hold for 5 seconds after each slide with the goal of achieving bending at the knee slightly greater than 90 degrees. To increase bending, you can also slide your bottom forward on the chair while keeping your foot planted.



Total Knee Replacement Post-Op Exercises

Knee bending

Stand holding onto the back of a sturdy chair, counter, or table for support. Bend your knee by bringing your heel toward your buttocks. Do not bend your trunk forward. Hold for 5 seconds. Relax and repeat.



Knee Exercise Workout Plan

To be completed with your physical therapist.

Weeks	Recovery Goals
1 to 2	<ul style="list-style-type: none"> N Continue to use a walker or crutches unless otherwise instructed. N Walk at least 200 to 400 feet with a walker or crutches. N Walk up and down curbs and ramps. N Actively bend your knee to 90 degrees. N Straighten your knee completely. N Ask when you can start driving again at your follow-up appointment with your physician. N Gradually resume light household tasks. N Three times a day, do 20 minutes of home exercises from the program given to you — with or without the physical therapist.
3 to 4	<ul style="list-style-type: none"> N Achieve all the goals listed above. N Wean from the walker or two crutches to a cane as instructed. N Walk at least a quarter of a mile. N Actively bend your knee to 90 degrees. N Continue to straighten your knee completely. N Independently shower and dress. N Resume household tasks. N Twice a day, do 20 minutes of home exercises from the program given to you.
5 to 6	<ul style="list-style-type: none"> N Achieve all prior goals. N Walk with a cane or single crutch with no limp. N Walk a quarter to half a mile. N Begin progressing on stairs from one foot at a time to normal fashion (foot over foot), but only for a few stairs at a time. N Actively bend your knee to 115 degrees. N Twice a day, continue with your home exercise program.
7 to 12	<ul style="list-style-type: none"> N Achieve prior goals. N Walk with no cane or crutch and without a limp. N Climb and descend stairs in normal fashion (foot over foot). N Walk a half to a full mile. N Improve strength to 80 percent. N Closer to week 12, resume all activities including dancing, bowling, and golf.

OUTLOOK

Most patients enjoy less joint pain and improvement in their quality of life following joint replacement surgery. Under optimal conditions, your artificial joint should give you many active years. Your orthopedic surgeon and physical therapist will work with you to help keep your new joint healthy for as long as possible. It is important that you maintain a regular, lifelong exercise program for the health of the muscles around your prosthesis. You should consult with your surgeon if you have specific questions related to activities that are appropriate for you.

RESUMING ACTIVITIES

- Give yourself at least six weeks following surgery to heal and recover from muscle stiffness, swelling, and other discomfort.
- While joint replacement surgery may allow you to resume many daily activities, **DO NOT** push your implant to do more than you could do before your problem developed.
- You may need to adjust your activity choices to avoid putting too much strain on your joint. You may also need to consider alternative work activities to avoid the heavy demands of lifting, crawling, and climbing.

In general, physical activities should NOT:

- Cause pain, either during activity or afterward
- Jar the joint, such as when running or jumping
- Place the joint in extreme ranges of motion.

- Always consult your orthopedic surgeon if you begin to have pain in your artificial joint or if you suspect something is not working correctly.
- Ask for help — while your goal is to do things for yourself, don't take unnecessary risks.
- Enjoy low-impact activities such as walking and aquatic exercise as part of your lifelong exercise program.
- Avoid high-impact activities, such as running or tennis, and high-risk activities, such as downhill skiing, with the potential to damage or fracture your prosthesis.
- When doing household chores, do not get down on your knees; instead, use long-handled mops or brushes. When cooking, gather all of your supplies and sit to prepare meals, and place frequently used items within easy reach to avoid too much bending or stretching.
- Keep your appointments with your doctor — it is important to monitor healing and function on a regular basis. You may need to check in with your doctor two to three times during the first two years and at intervals of two to three years thereafter. During those visits, your surgeon will take X-rays and monitor wear.
- Watch for infection — your new joint is a foreign substance to your body. Germs from other infections can move to this joint and cause infection. Call your family doctor immediately if you have any signs of infection, such as a skin infection, urinary tract infection, abscessed teeth, etc. Early treatment is crucial.
- Alert your dentist and family physician that you have had joint replacement before undergoing any dental work, procedures, or surgery. You will need to take antibiotics first to prevent infection.
- Your new joint may set off metal detectors in airports and other secured buildings. Advise the screeners and they will use a wand to comply with security procedures.

