

# JOINT ACADEMY

Patient Education Guide

Dear Patient,

Thank you for choosing Western Reserve Hospital (WRH). Our goal is to provide you with expert care, a safe experience and to prepare you for your return home.

This information will guide you through your joint replacement. We have included details about preparing your home, what to expect from pre-surgical testing through discharge and even what to expect at home after your surgery.

You can expect to stay with us for 1-2 days after your surgery. While with us, we ask that you work with your team of healthcare professionals to make your stay as comfortable and safe as possible. You will see your surgical team on a daily basis and work with the nursing staff, physical therapists and occupational therapists.

In turn, you should expect compassion and respect from all of our staff at WRH. We will do everything possible to provide the services to meet your needs and increase your comfort. If you feel that we are not meeting your needs, please notify us immediately. We are all here to help you with your recovery and help prepare you for your transition home.

Again, thank you for selecting us; we are privileged to have you as one of our patients.



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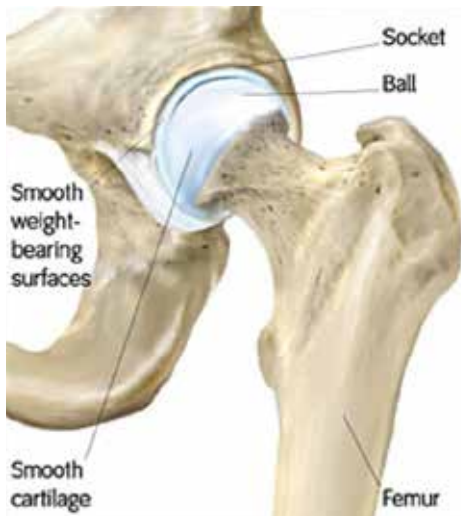
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# Total Hip Replacement

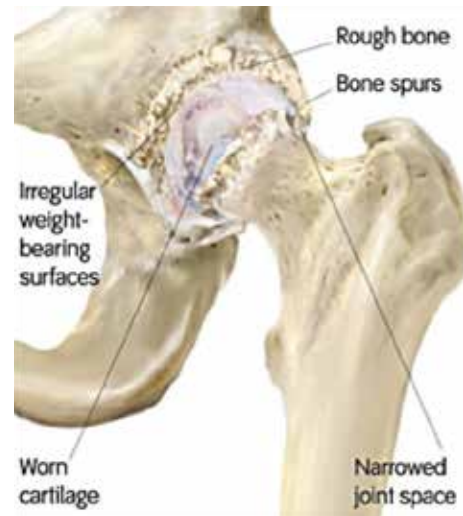
## Healthy Hip:

Your hip joint is the largest weight bearing joint in your body. It is considered a “ball in socket” joint because, in a healthy hip, the smooth ball at the end of the thigh bone fits easily in the end of the hip socket. A layer of cartilage covers the ends of these bones, serving as a cushion while allowing the ball to glide within the socket.



## Problem Hip:

Conditions such as osteoarthritis, avascular necrosis, injury, or rheumatoid arthritis can cause severe pain and decreased movement as the cushion of cartilage wears away. Joint surfaces can rub against each other, becoming rough, pitted, irritated, and narrowed. This can cause pain and difficulty walking.



## Replacing Worn Joints:

A joint replacement, also called arthroplasty, involves replacing a painful joint with a new mechanical joint, called a prosthesis. The hip prosthesis consists of a specially designed ball and socket that replaces your worn hip joint. The ball and stem replace the worn ball of your thigh bone. A cup replaces the rough socket. The prosthesis has smooth surfaces that fit together and allow the ball to move easily within the socket, much like a healthy hip. This allows you to move and walk more easily and with less pain.

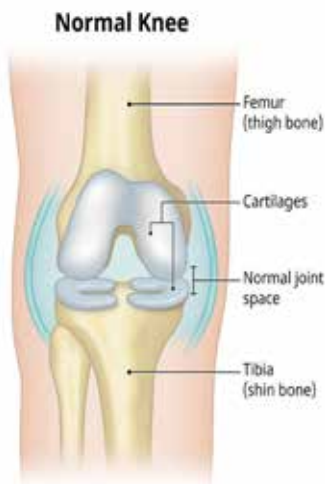




# Total Knee Replacement

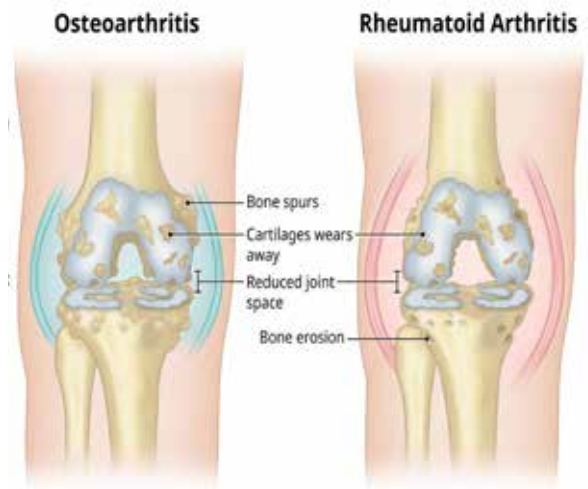
## Healthy Knee:

In a healthy knee, the bones are smooth and glide together easily in the knee joint, allowing you to walk without pain. The cartilage between the knee joint serves as a cushion, permitting the bones to rotate, glide and roll upon each other while you walk.



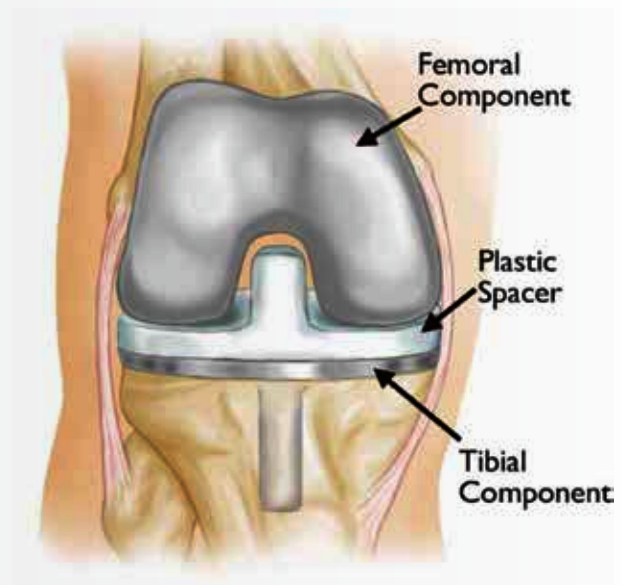
## Problem Knee:

Conditions such as osteoarthritis, avascular necrosis, injury, or rheumatoid arthritis can cause severe pain and decreased movement as the cushion of cartilage wears away. Joint surfaces can rub against each other, becoming rough, pitted, irritated, and narrowed. This can cause pain and difficulty walking. The knee cap may move, causing the knee to feel unstable.



## Replacing Worn Joints:

A joint replacement, also called arthroplasty, involves replacing a painful joint with a new mechanical joint, called a prosthesis. The knee prosthesis consists of a smooth surfaces, much like a healthy knee. The femoral component caps the end of the thigh bone. The tibial component covers the underside of the knee joint surfaces. The plastic spacer replaces the damaged cartilage. This allows you to move and walk more easily and with less pain.



# My Medication Checklist

List all the medications you are currently taking. This includes medications ordered by your doctor as well as over-the-counter medications including pain relievers, vitamins, herbal supplements, etc. Use an additional sheet of paper as necessary.

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# Preparing for Surgery

## Medication Caution

**Always consult with your doctor first in regard to any medication.**

Many medications are discontinued before surgery. The time frame to stop these medications may vary, so always consult your doctor. Below is a general guideline:

Medication	Stopping time frame
Herbal Supplements	Stop 14 days prior to surgery
Aspirin	325 mg - Stop 7 days prior to surgery, or per prescribing physician recommendations 81 mg - Stop 3 days prior to surgery, or per prescribing physician recommendations
Eliquis® (apixaban)	Stop 3 days prior to surgery
Xarelto® (rivaroxaban)	Stop 3 days prior to surgery
Coumadin (Warfarin)	Stop 5 days prior to surgery, or per prescribing physician recommendations
Pradaxa® (dabigatran)	Stop 3-4 days prior to surgery
Plavix (Clopidogrel)	Stop 5-7 days prior to surgery, or per prescribing physician recommendations
Pletal (Cilostazol)	Stop 2-4 days prior to surgery
Trental (Pentoxifylline)	Stop 8 hours prior to surgery
NSAIDs (see list below)	Stop 3-5 days prior to surgery
Plaquenil (hydroxychloroquine sulfate)	Stop 1 day prior to surgery

**Some commonly prescribed or over-the-counter Nonsteroidal Anti-inflammatory Drugs (NSAIDs) are:**

Advil/Ibuprofen/Motrin	Aleve/Naprosyn/Naproxen	Arthrotec/Diclofenac/Misoprostol	Celebrex/Celecoxib
Daypro	Feldene	Indocin/Indomethacin	Lodine
Mobic/Meloxicam	Oruvail	Relafen	

# Guide to Herbal Medications and Dietary Supplements

Stop taking all herbal medications 14 days prior to surgery. Inform your physician if you have been taking any **herbal preparations or dietary supplements**. They may cause complications if taken before surgery.

Supplement	Complication
Bromelain	Increased risk for bleeding
Chondroitin	Irregular heartbeat, increased risk for bleeding
Echinacea	Immunosuppressant, poor wound healing
Ephedra	Increased heart rate and blood pressure
Garlic	Increased risk for bleeding
Ginkgo	Increased risk for bleeding
Ginseng	Increased risk for bleeding
Glucosamine	<b>Reduced effectiveness of insulin, hyperglycemia</b>
5-hydroxytryptophan	Interaction with Tramadol (ultram) and antidepressants can be life threatening
Kava	Increased risk for sedation
Fish Oil/Omega-3 fatty acids	Increased risk for bleeding, hemorrhagic stroke
Multivitamin	Increased risk for bleeding
St. John's Wort	Multiple herbal and drug interactions
Turmeric	Increased risk for bleeding
Valerian	Increased risk for sedation
Vanadium	Increased risk for bleeding
Vitamin A	Increased risk for bleeding, liver damage
Vitamin C	Dehydration, increased concentration of NSAIDs
Vitamin E	Increased risk for bleeding
Zinc	<b>Reduced effectiveness of NSAIDs</b>



## A Positive Approach

Due to medical advancements, total joint replacement surgery is possible to relieve your pain and discomfort and improve your activity level. The pain and activity limitations after surgery will be different from prior to surgery and short term. An important part of the recovery process is using your new joint by walking and doing the exercises that your doctor orders.

Your recovery and exercise plan will be tailored to you. Each patient recovers differently and joint replacement revisions often progress slower than the initial surgery.

Your stay at the hospital will be short and your recovery will be continued after discharge, ideally in your home. A discharge plan will be discussed with you by your surgeon prior to surgery. It is important for you to make a commitment to follow your doctor's instructions and complete your exercise program after surgery to receive the most benefit from your joint replacement surgery.

## Important Observations to Report Before Surgery

If your physical condition changes before surgery, such as you develop a cold, persistent cough, fever, chills, or muscle aches, tell your surgeon as soon as possible. If you notice a change to your skin, such as a draining wound or an area with swelling, redness, heat, tenderness, or pain, tell your surgeon right away.

## Smokers Should Know

Smoking shrinks the arteries, decreases blood flow, speeds your heart rate, raises blood pressure, and increases fluid production in your lungs. You will recover faster if you stop smoking before your surgery. Smoking is not permitted anywhere on hospital property. This includes e-cigarettes and any kind of chewing tobacco.



# Pre-Surgical Testing



After your surgeon's office has scheduled your surgery, you will be contacted to schedule an appointment for pre-surgical testing (PST). If you are not home, they will leave a message. Please return their call to register and make your appointment. We require this appointment for an anesthesia evaluation even if you have already been seen by your primary care provider.

All patients require PST. The amount of testing and length of your appointment will vary based upon your age, health, medications, and type of anesthesia. Plan on being at PST for at least 90 minutes. Bring your medication bottles, including all over-the-counter medications and supplements, and a list of your previous surgeries. You may eat as usual before this appointment.

During your visit, a Certified Nurse Practitioner (CNP) will obtain a detailed health history, review your medications and allergies, and take your vital signs. Then the CNP will perform a physical exam.

There may be testing such as blood work, EKG and chest X-ray. If you have had blood work performed elsewhere within the past 30 days of your planned surgery date, or an EKG or chest X-ray within the past 6 months, bringing a copy of those results may save us from having to repeat these tests.

Our pre-surgical testing department works closely with the anesthesiologists to ensure your safety during surgery. In a few cases, the CNP may ask the anesthesiologist to see you during your PST appointment. Otherwise, you will meet him the day of your surgery. If you have had complications with anesthesia in the past, please mention it at this appointment.

Patient education and pre-operative instructions are an important part of your pre-surgical testing. We will do our best to answer any of your questions or concerns. Our highly skilled professional staff will ensure you receive the safest and highest quality care during your surgical experience. It is our goal to make your visit as pleasant and convenient as possible.

# Patient Checklist for Surgery

Use this checklist as a guide to follow in the time leading up to your surgery:

✓	Schedule an appointment with your primary care provider for medical clearance.
	Schedule any dental check-up or dental care prior to your total joint replacement surgery.
	Read your Joint Academy Patient Education Guide.
	Prepare your home for convenience upon your return from the hospital based on your care team's recommendations.
	Discuss discharge planning/transportation with your caregivers.
	Arrange for caregivers for several days.
	Avoid smoking and alcohol consumption. If you would like assistance with quitting smoking, we have services available at New Choice Pharmacy.

	Do not eat or drink after midnight the night before surgery.
	Use Hibiclens wash as directed.
	You may take your approved medications on the morning of surgery with sips of water.
	Report to Western Reserve Hospital at the designated day and time of your surgery.
	Please contact your Orthopedic surgeon's office with any questions.
	Arrange for transportation to physician and therapy appointments.

Insurance will not usually cover the transportation to home from the hospital. Most patients can go home in their family car with some assistance getting in and out of the car. If you are traveling by car, it is helpful to use a midsize car or minivan. Small cars or cars with low bucket seats will be difficult for you to travel in safely. Have the driver bring one or two pillows to sit on.



# Prepare Your Home

Follow this checklist to help get your house ready for your return home.

✓	Consider installing grab bars in the shower/tub to improve safety. Suction cup grab rails are not recommended.
	Consider installing a handrail or grabrail on entry steps if a rail is not present.
	Put clean linens on your bed.
	Put everything you will need on one level to avoid using steps, if possible.
	Perform any yard work or arrange to have it done.
	Arrange for someone to collect your mail and take care of your pets or loved ones, if needed.
	Move furniture as needed to provide easy access with a walker to the bedroom, bathroom, and kitchen. You may need to ask someone to help you.
	Make sure all walkways are free of clutter. Pick up all throw rugs and tack down any loose carpeting.
	Remove electric/phone cords from walkways or tape them to the floor to avoid a trip/fall after surgery.
	Consider having nightlights in the bedroom, bathrooms, and hallways.

	Prepare meals ahead of time. Freeze them in single-serving containers.
	Place cooking supplies and utensils where they are easy to reach. We recommend between hip and shoulder height.
	If you have a tub/shower combo in your bathroom, consider taking off the doors and using a tension rod with a shower curtain. This will make it easier to get in and out of the shower.
	Find a high-seated chair with arms that will allow you to sit down comfortably and stand up easily. Dining room chairs with arms are ideal.
	Anticipate other needs you may have. For example, if your bedroom is on the upper level of your house, you may wish to prepare a sleeping area on the main level for when you first come home. Even if you plan to stay at someone else's house after surgery, you will eventually be returning to your house, so plan ahead. If you need any other equipment for your home, we can help you locate and learn how to use it while you are in the hospital.

## Stay safe and avoid falls:

- DO NOT wear open-toe slippers or shoes without backs. They do not provide adequate support and can lead to slips and falls.
- Rise slowly from either a sitting or lying position. This helps prevent feeling dizzy or light-headed.
- Gather all your supplies at one time. Put them within reach.





# Equipment for Returning Home

Adaptive equipment may be recommended to you after your surgery. Below are items that are frequently recommended to assist you with completing your daily tasks safely. Unfortunately, many of these items are not covered by insurance.

During your stay your occupational therapist will recommend the equipment that is recommended for you and will provide you with a handout as to where these items can be purchased. Any of the adaptive equipment can also be borrowed as they can be easily disinfected.

## Adaptive Equipment Options to Assist Postoperatively



**Toilet Seat Riser with and without Armrests:** Available in a variety of forms. Place over or on your toilet to raise the level of the seat. Models with handrails may be helpful to assist you with sitting and standing.



**Bedside Commode:** A portable toilet to place within your household. May also remove bucket from bedside commode and place over the toilet seat for additional height and armrests.



**Tub Transfer Bench or Shower Chair:** Good for tub or shower. Place seat in the tub and elevate to the appropriate height. Bath seat will elevate to 21”.

## Hip Kit



**Long-Handled Shoe Horn:** The handle should extend on this shoe horn to avoid unnecessary bending when putting on shoes. Place the horn inside the back of the shoe and push heel down into the shoe.



**Long-Handled Bath Sponge:** Assists in bathing, especially those hard to reach places. Wrap a towel around the sponge to help with drying. Rinse the sponge thoroughly after washing and let air dry for longer use.



**Sock Aid:** Used to help put on socks to prevent unnecessary bending.



**Grabber/Reacher:** Assists in picking items off the floor, putting on pants/underwear or for taking items out of cabinets. Squeeze the handle to close/open the claws on the end. Helps to avoid unnecessary bending.

# Using Hibiclens (Chlorhexidine) to Clean Your Body

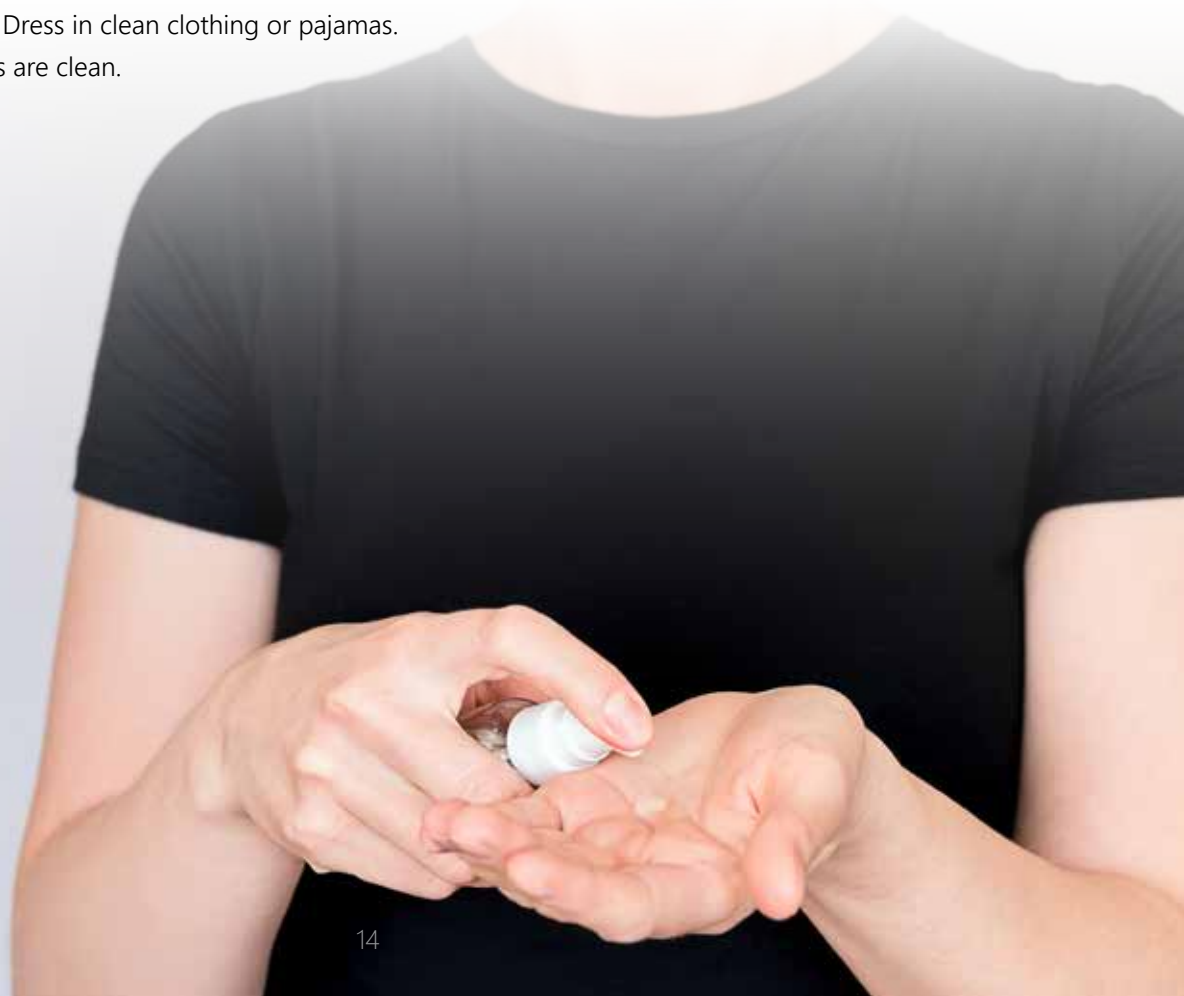
Hibiclens (Chlorhexidine) is a non-lathering wash that can help prevent surgical infection.

## **Before you bathe or shower:**

- Carefully read all directions on the product label.
- Hibiclens (Chlorhexidine) is not to be used on the head or face. Keep out of your eyes, ears and mouth.
- Hibiclens (Chlorhexidine) is not to be used in the genital area.
- Hibiclens (Chlorhexidine) should not be used if you are allergic to chlorhexidine gluconate or any other ingredients in this preparation.  
\*See Hibiclens (Chlorhexidine) label for full product information and precautions.
- Do not shave the surgical site for 2 days prior to surgery.

## **Additional Hibiclens (Chlorhexidine) instructions:**


- Use Hibiclens (Chlorhexidine) the morning of surgery, the day before that, and the day before that, for a total of three times.
- If you plan to wash your hair, do so with your regular shampoo. Then rinse your hair and body thoroughly to remove any shampoo residue.
- Wash your face and body with your regular soap and thoroughly rinse your body with warm water from the face down.
- Standing away from shower, apply the minimum amount of Hibiclens (Chlorhexidine) necessary to cover your skin.
- Thoroughly rinse it off with warm water.
- Do not use your regular soap after applying and rinsing Hibiclens (Chlorhexidine).
- On your final day of using Hibiclens (Chlorhexidine), do not apply any lotions, powders or perfumes to the body areas that have been cleansed with it.
- Dry off with a clean towel. Dress in clean clothing or pajamas.  
Make sure your bed sheets are clean.





# What to Bring to the Hospital

## Follow this checklist to pack for the hospital:

	Your photo ID, insurance card and prescription card if you have one.
	Comfortable slip-on or walking shoes. Make sure they are wide enough to allow for some swelling on your operative leg but are not too loose. Flip-flop, sandals or Crocs are not recommended.
	Comfortable and loose clothing.
	Personal hygiene products, such as soap, shampoo, toothbrush, and toothpaste.

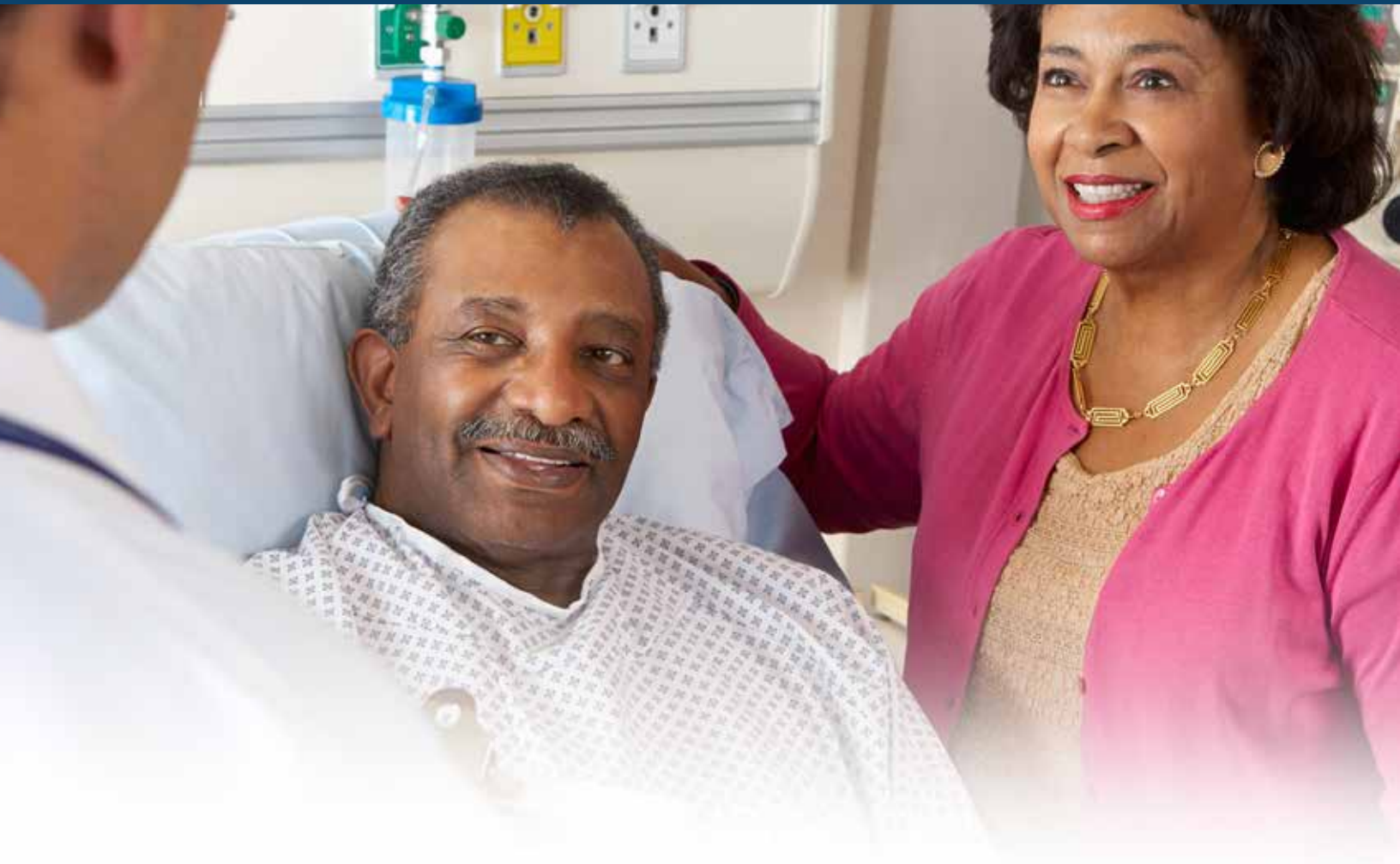
## Bring the following, as it applies to you:

	Case for dentures and denture adhesive.
	Eyeglasses or contact lenses and case.
	CPAP or breathing machine, with settings.
	Copies of your living will and/or medical power of attorney.

## Please leave at home, as the hospital is not responsible for any lost or missing belongings:

	Jewelry and valuables.
	Credit cards, cash and purse/wallet. Please keep in mind that if you receive a prescription, you can fill it at the hospital, and there may be a cost.
	All medications, especially pain medications, unless you are instructed otherwise.
	Any valuables that you bring may be secured by protective services.

# Your Total Joint Replacement Team



**The better prepared you are for surgery, the easier your recovery will be.**

Our orthopedic joint replacement specialists are dedicated to performing state-of-the-art hip and knee replacement procedures to improve function and eliminate pain in patients' diseased joints. Nationally, more than half a million total joint replacements are performed each year, with hip and knee procedures accounting for the majority of operations.

The orthopedic specialists at Western Reserve Hospital (WRH) work with a team of medical professionals to assist you throughout your surgery and recovery. You will be seeing many team members while you are a patient at WRH, and they may include the following:

## **Orthopedic Surgeon:**

Your surgeon will perform the surgery and direct your care throughout your hospital stay.

## **Anesthesiologist and Certified Registered Nurse Anesthetist (CRNA):**

The anesthesia staff will greet you during the pre-surgical phase of your surgery on the day of arrival. They will provide education about the medication and process used during your surgery. Anesthesia is also responsible for your care during the recovery phase in the Post Anesthesia Care Unit (PACU). It is your responsibility to ask questions, voice concerns and discuss any past complications with anesthesia.

**Consultants:**

Your surgeon may ask other physicians to assist in your care. They may evaluate your medical condition and manage other aspects of your care throughout your stay and through the discharge process.

**Orthopedic Residents:**

Residents will assist in your surgery and follow your progress closely. You will see them in the early morning. They will work with your surgeon and nursing staff to promote a rapid recovery.

**Case Manager and/or Social Worker:**

Your case manager and social worker will meet with you and assist with your discharge process, which may include arranging for additional care after your hospital stay. If you have any concerns about your discharge, please share them with the staff.

**Staff Nurses and Clinical Technical Assistants:**

The nurses will offer education and provide medications and treatments as ordered by your doctors. They will assess your physical condition and communicate closely with your surgical team. Both nurses and clinical technical assistants will see to your daily needs and assist with bathing, dressing and mobility.

**Physical Therapists:**

Your therapist will evaluate your physical function and instruct you on an exercise program after your surgery. They will work with you while you are in the hospital and communicate your progress and discharge needs to the surgical team and case manager.

**Occupational Therapists:**

Your therapist will focus on promoting independence with self-care tasks, such as bathing, dressing, toileting, and home management tasks while complying with your postoperative restrictions.

**Pharmacist:**

The pharmacy staff works closely with your physicians and nurses to ensure that you are taking the most appropriate medicine for your condition. They are available to review your medications and the interactions they have with each other. They also can deliver your home-going medications directly to your room.

**Patients:**

Your role is very important in your recovery. Please communicate with the staff at WRH and ask any questions to ensure you fully understand your instructions. Follow your surgeon's and therapist's instructions and restrictions. Please ask questions regarding your care and report any problems or concerns.

# What to Expect in the Hospital

## Surgery

Patients are admitted to the hospital the same day as their surgery. Pull your car to the main entrance where free valet parking is available. Upon entering you will be greeted by a member of our concierge desk and escorted to the surgical area by one of our volunteers.

When you arrive in the same-day surgery area, the receptionist will educate you and your companion(s) on what to expect. You will be asked to be seated and your nurse will call your name when it is time for your preparation to begin. At this point, your guests will be asked to remain in the waiting area until the surgical staff has completed some personal and time-sensitive tasks. You will be asked to change into a gown. Your medical history and medications will be reviewed. An IV will be started and blood may be drawn. Your guests will then join you.

You will see your surgeon and the surgical staff prior to surgery. They will verify the surgical site and sign the operative limb. They will answer any questions that you or your guests may have.

The anesthesia staff will also meet with you to discuss your options for anesthesia and to review a brief medical history, medications and allergies. If you have had any problems with anesthesia in the past, please inform the provider at this time.

You may feel that several of our staff are asking the same questions. This is because we want to provide you with the safest experience. Please remember, this is a great time to ask any questions or voice any concerns.

Your guest(s) will be escorted to the waiting room and you will be given a sedative and be taken into the surgical suite. When the operation is over, the surgeon will meet with your guests and give them a progress report.

After surgery, you will be taken to the Post Anesthesia Care Unit (PACU) for recovery until your sedation wears off. Many people feel cold when they wake up, so warm blankets are available if you need them. Monitors will measure your blood pressure, heart rate and breathing. Nursing will medicate you as needed. While you are in the recovery area, a sample of your blood may be drawn to check your blood count, and an X-ray will be taken to check your new joint. You will remain in the recovery room for about 2-3 hours. Due to privacy regulations, visitors are not permitted in this location.

Once you are stable, your visitors will join you as you are taken by bed to the surgery unit where you will stay the night. Nursing staff will orient you to the room, complete an assessment including pain and nausea, and your medical history will be reviewed. A clear liquid tray will be delivered shortly after your arrival, unless contraindicated. Please communicate any questions, concerns, or increases in pain or nausea to your nursing staff.

## Pain

Your physicians and nurses are committed to developing a pain management plan to maximize pain control, which will help you meet your therapy goals. It is important to take pain medication prior to therapy sessions. Pain is typically controlled with oral pain medication, with additional IV pain medication as needed. Your pain medication will not be scheduled; it will be ordered "as needed," which means that you need to request your medication. To remain as comfortable as possible, it is important to request pain medication before your pain level gets too high. Please use your call light to let the nursing staff know when you need pain medication. Staff will also regularly check on you to see if you need anything and ask you how your pain is, this is usually in numeric value of 0 being no pain and 10 being severe pain. Everyone feels and responds to pain differently, so let your nurse know if your pain medicine is not working so that changes can be made. Some of these medications may cause sleepiness and possibly nausea. There is medication available to help with nausea.

Other techniques can also help you manage your pain after surgery:

- **Activity:** It is important to start moving soon after surgery. Moving helps your breathing and digestion and will help you heal faster. It may hurt to move; however, being active will help lessen pain. On the day of surgery, your nurse or therapist will help you sit up and get out of bed. You will start walking and exercising when the therapy team works with you. Please note, you are expected to spend several daytime hours out of bed and in a chair.
- **Distraction:** By focusing your attention on something other than your pain, you can relax and stop thinking about it. Playing cards or games, visiting with friends and family, watching television, reading, and listening to music are some of the ways you can distract yourself.
- **Elevation:** While elevating your leg, be sure not to place a pillow directly under the knee. This can inhibit blood flow and increase the risk of a blood clot forming. Instead, place a pillow under your ankle.
- **Comfort:** Get as comfortable as possible while you are in bed. Ask your nurse for more pillows or blankets if you need them. Make sure your room temperature is not too hot or too cold. Other things that may improve your comfort include having your family rub your back, applying a cool cloth to your face or hands and keeping light and sound to a minimum.
- **Ice/Cold Therapy:** The use of ice can relieve pain, swelling, inflammation, and spasm. Your nurse will provide methods for icing while you are here.





## Physical and Occupational Therapy

You will have physical therapy sessions and occupational therapy while you are in the hospital. The first session will be either the day of surgery or the morning after. Your whiteboard will notify you as to when your therapy sessions are scheduled. Be sure to eat your breakfast and take your pain medication at least 30 minutes prior to your therapy session. Following surgery, active participation with therapy is an important part of your recovery. Your therapist will make recommendations for your ongoing therapy, in collaboration with your surgeon, after you leave the hospital. At discharge, you will be provided with an individualized written home exercise program, medical equipment recommendations and icing instructions. Regularly moving your new joint and formal therapy are an important part of your recovery. Ideally, it is recommended you have at least one family/friend stay with you for the first one to two weeks to be available for you as needed. For those that may require additional therapy, such as home care or skilled care through a nursing facility it is recommended you are prepared with 2-3 choices for a skilled nursing facility to assist in providing a smooth transition from the hospital.

## Diet

We realize you will have had nothing to eat since midnight the night before, however, it is important for your digestive system to “wake up” after anesthesia. Your first meal after surgery will be clear liquids. Usually, patients tolerate a clear liquid meal following surgery and then resume eating solid food at the next meal, providing you do not experience any postoperative nausea or vomiting. While staying with us, you will be using our room service system, which allows you to order from a menu between 6:30 a.m. and 6:00 p.m. Meals arrive within one hour, or at the requested time.

## Home Medications

Your home medications will be verified with you at different times to ensure accuracy. Your surgical staff will order the medications that are necessary and safe for you to take during your hospital stay. Your nurse will give them to you at pre-established times. If these times do not coincide with the times you take your medications at home, feel free to discuss this with your nurse. Please do not take any medications unless your nurse gives them to you.





## **Blood Clot Prevention**

Having a joint replaced puts you at risk for developing a blood clot. There are several ways you and your nurse will help minimize these risks:

- You will be encouraged to get up and walk around every day, including the day of surgery.  
This promotes blood flow.
- Your nurse will remind you to do ankle pumps at least 10 times every hour while you are awake.  
This promotes the return of your blood from your legs back up toward your heart.
- Arterial/Venous Impulse (AVI) boots will be on your feet or Sequential Compression Device (SCD) leggings will be applied to your calves. These help the blood circulate well in your legs and throughout your body.  
These should be on while in bed and in the chair.
- Your surgeon will be prescribing a blood-thinning medicine for you while you are in the hospital.  
This medicine will be continued after you go home.

## **Pneumonia Prevention**

Surgeries can increase the risk of developing pneumonia. Your lungs consist of many air sacs that get larger when you breathe. When awake, we periodically take a deep breath and blow off extra fluid from these tiny air sacs. When you are sleeping, you do not take deep breaths, causing fluid and mucous to build up in the air sacs. If allowed to collect, pneumonia can develop and slow down your recovery.

- After surgery, make a conscious effort to deep breathe and cough.
- Your nurse will bring you an incentive spirometer and instruct you on its use.  
This device helps you visualize your deep breaths.
- Use the incentive spirometer at least 10 times every hour while you are awake.  
This device will help us assess the amount of air you are using with each breath. Continue to use it when you go home.
- Elevate the head of your bed.
- If you meet CDC guidelines, your nurse will offer you a pneumonia vaccine. If you accept, it will be given before you leave the hospital. Talk to your nurse to see if you qualify for this vaccine, as there are certain age and medical requirements.
- During the flu season, we will offer you the influenza vaccination.

## **Operative Incision and Dressing**

It is common to have some seepage from the incision during the first week. A waterproof dressing will be applied to the surgical site. This dressing may get changed again before you discharge.

## **Antibiotics**

After your surgery, you will be given two to three doses of intravenous antibiotics to help prevent infection. This is the recommended practice throughout the country for total hip and total knee replacement surgery.

## **Blood transfusion**

On a rare occasion, you may require a blood transfusion if your blood count drops below an acceptable range. All our blood products are screened, tested and considered safe. If needed, your consent or refusal will be verified prior to any blood product being given.

# After Your Hospital Stay

## Activity

- Refer to your surgeon-specific patient education and hospital discharge instructions.
- Perform your prescribed exercises 2-3 times each day.
- Avoid spending long periods of time seated or in bed.
- Assume a routine that has you moving with your walker every 1-2 hours to avoid stiffness.
- Take a walk 3-4 times a day, gradually increasing the distance.
- Use your walker at all times, until advised otherwise by your surgeon or therapist.
- Progress to use of cane as directed by your therapist or physician.
- For knee replacements, it is very important to regularly bend and straighten your knee fully to work on regaining functional knee range of motion. Avoid placing pillows directly under your knee. Avoid keeping your knee in one position for prolonged periods.
- For hip replacements, use the recommended adaptive equipment to complete self-care tasks until your surgeon discontinues your hip precautions.
- Limit stair climbing if advised by your surgeon.
- You may ride in a car. If traveling long distances, be sure to stop frequently and walk.
- Your physician will recommend to you when you are cleared to drive a vehicle
- For swelling of the lower legs, elevate your leg while in bed. Elevate the leg on 2-3 pillows turned lengthwise under your leg for 40 minutes, 2-3 times a day, "toes above your heart."
- You may bear weight on your surgical leg as tolerated, unless instructed otherwise by your surgeon.
- The goal is to gradually resume your normal daily routine.

Whether you have reached all your goals within three months or not, it is highly recommended you continue to participate in an exercise program. Exercise can help maintain healthy muscles around your new joint. With permission from your surgeon and primary care doctor, it is recommended you exercise 3-4 times per week with each session lasting 20-30 minutes. Low-impact activities are recommended; these include walking, riding a bike, participating in an exercise class, or performing a home exercise program.



## **Incision Care**

- Remove the waterproof dressing in 1-2 weeks, per your surgeon's directions. You are permitted to shower with this dressing on.
- After the dressing has been removed, gently clean the entire length of the incision with soap and water daily. Pat dry.
- Do not apply lotions, creams or powders on the incision until you follow up with your surgeon.
- You may shower. No baths. Do not submerge your incision.

## **Preventing Blood Clots**

- Use blood thinning medications as directed by your surgeon.
- Wear your support hose during the day for 2-3 weeks. You may need assistance to apply.
- Perform your exercises faithfully.

## **Pain Control**

- Make a schedule to take your pain medicine regularly if needed. Be sure to take pain medicine at least 30 minutes before physical therapy and planned exercises.
- Time your pain medicine so you take a dose before you go to bed. This will help keep you comfortable through the night while you sleep. If you wake up in the middle of the night, you may need to repeat the dose.
- You can start taking pain medicine less often as your pain improves. Gradually, you will wean yourself off the prescription pain medicine and take Tylenol (acetaminophen) instead.
- If you should need pain medication refills, you should call your surgeon's office during office hours. Look ahead so that you don't run out over the weekend.
- Try to change your position at least once every hour while you are awake.

## **Why use ice?**

The use of ice can relieve pain, swelling, inflammation or spasm in your new joint. Cold causes the blood vessels to constrict, which reduces blood flow. After removing the ice, the body's natural response is for the blood vessels to dilate, which in turn brings new blood to the surgical site to facilitate healing. This cycle also creates a pumping action which removes swelling, allowing your new joint to move more easily. Additionally, icing decreases activity of the nerve fibers which reduces pain. It is important that you are consistent with your icing program after surgery as regular icing assists with the management of post-operative swelling and pain, when pain and swelling are effectively managed it allows you to steadily progress your activity level.

Early in your recovery it is recommended that you ice the surgical area at least 4-5 times a day for 15-20 minutes each icing session. An effective schedule is to ice in the morning, at noon, mid-afternoon, evening and before bed. Do not use ice while sleeping. When icing always place a towel or pillowcase between the ice and your skin as direct contact with ice can cause damage to the skin. It is also important to monitor your skin when using ice; the skin should be pink, if the skin appears white, remove the ice until the pink flush is regained. If this occurs you may need to use an additional layer of protection between the ice and your skin. When icing multiple times per day, it is important to allow the tissue to rewarm for at least 45 minutes to an hour between icing sessions.

As you progress through the rehabilitation process you can begin intermittently icing as needed for symptom control. It is also recommended to ice following physical therapy appointments, after completing your individualized exercise program, or after any prolonged standing or walking.

Any of the below options can be used to effectively ice your new joint:

**Ice packs:** Gel ice packs are ideal as they can conform to the joint. You can secure the ice pack with an Ace wrap if needed.



**Frozen vegetables:** A bag of small frozen vegetables, such as peas or corn, can be used for icing. Be sure to clearly mark the bag as "DO NOT EAT" as you will be thawing and reusing the bag which makes the food unsafe to consume.



**Homemade ice pack:** Combine 3 cups of water with 1 cup rubbing alcohol in a zip-lock bag and freeze it overnight until slushy. Refreeze after every use. The mixture is unsafe to eat or drink. Ensure the bag does not leak on other items in your freezer and keep out of the reach of children.



**Continuous Ice System:** This system provides a continuous flow of cold water through a pad that is wrapped around your knee.





## Managing Leg Swelling

Leg swelling is a common occurrence following joint replacement surgery. Excessive swelling may interfere with your return to normal activity and could lead to more serious complications. Leg swelling occurs most frequently after a patient leaves the hospital. When you spend an extended period time in a seated position, swelling occurs. This is because blood is returned to the heart through the venous system. Proper blood return from the legs depends on the integrity of the valves within the veins and is assisted by muscle contraction during activity. Valves allow blood to move toward the heart and keep gravity from making blood flow back down the leg. Following joint replacement surgery, muscle contracture is decreased because of low activity level.

The veins become distended and the valves become less effective. You can help minimize the swelling by changing your body's position, so that gravity can work in your favor. The position changes must involve a complete horizontal lying down with the legs elevated higher than the level of the heart. In this position, excess fluid is drained from the leg by force of gravity.

The position is easily accomplished by lying on a sofa or bed, putting a pillow under the involved knee and calf and raising the leg high above the level of your heart. Place 1-2 pillows lengthwise under your leg or simply under your ankle.

Drainage by gravity cannot occur if you are sitting in a chair with your leg elevated on a stool. Remember, the leg must be higher than the level of your heart.

Another way to help improve swelling is to walk, so that the muscles contract and act as a pump to send the fluid back to the heart. Ankle pump exercises are also helpful for contracting muscles and reducing swelling. While lying in bed, point and flex both feet slowly.

Lastly, swelling can be controlled by wearing compression stockings. These stockings should be knee or thigh length and worn during the day. Put them on in the morning and remove them at night. Wear them for 2-3 weeks. Hand wash the stockings and hang them up to dry.



## Staying Healthy

- Eat a well-balanced diet.
- Maintain a healthy weight.
- Exercise. Remember, in the first few weeks it is very important to follow your therapist prescribed home exercise program.
- Continue to avoid tobacco products as they hinder the healing process.
- Utilize your incentive spirometer during any extended periods of rest.
- Stop and think...use good judgment.

## General Guidelines

- After hip replacement surgery avoid sitting in a chair where you are positioned with your hips higher than your knees as this places stress on your new hip joint.
- Avoid sitting or lying on low and soft surfaces.
- Keep frequently used objects positioned between hip and shoulder level.
- Use a reacher for objects on the floor.
- Keep walkways at home clear and well lit.
- Always wear rubber-soled, closed-heeled shoes or slippers.

## Constipation

Taking pain medicine and decreased activity can increase the risk of constipation. Use stool softeners as recommended by your physician or pharmacist, usually two times a day. Be sure to eat plenty of fruits and vegetables; this will help normalize your bowel movements. Also, drink 6-8 glasses of water each day. You may need to take a laxative periodically.

## Returning to Work

You may not return to work 6-12 weeks after the operation. Some patients do return earlier, depending on the nature of their work, how flexible their workplace is with returning on a part-time basis initially, or whether work is done from home. We generally tell employers 6-12 weeks, but you may return sooner if you are physically ready. It is easier to return to work sooner than to request more time off. Discuss this with your surgeon if you have additional questions.





# Prevention of Surgical Site Infections

A surgical site infection is an infection that occurs after surgery in the part of the body where the surgery took place. Most patients who have surgery do not develop an infection, but sometimes it does happen.

## Before Surgery-What You Can Do

- Tell your physician about other medical problems. Allergies, diabetes and obesity can affect your surgery and treatment.
- Quit smoking. Patients who smoke get more infections.
- Do not shave near where you will have surgery 2 days before surgery as it will irritate the skin, making it easier to develop an infection.
- Use Hibiclens wash, as directed.

## After Surgery-What You Can Do

- Make sure you know how to care for your incision before you leave the hospital.
- Maintain your waterproof dressing as directed.
- Do not apply lotions, creams or powders on the incision until you follow up with your surgeon.
- Wash your hands after using the restroom and before meals.
- Always clean your hands before and after caring for your incision.
- If you have pets, keep them away from your incision.
- It is not recommended that you allow your pet to sit on your lap or sleep with you during your recovery.
- Make sure you know who to contact if you have questions or problems after you get home.

## Visitors--What They Can Do

- Wash their hands when they come to see you.
- Not touch the dressing or incision.

## Signs and Symptoms of a Surgical Site Infection

- Redness and increasing pain around the area where you had surgery.
- Drainage of cloudy fluid from your surgical incision.
- Fever above 101°.

**Call your healthcare provider immediately if you develop signs of a surgical site infection.**

# Blood Clots in Your Leg or Lung

Occasionally, blood clots form even when patients follow the preventive measures. Notify your surgeon if you experience signs of a clot in your leg:

- Excessive swelling in the lower leg that doesn't respond to elevation or you are just as swollen in the morning as the night before.
- Pain or tenderness in the calf muscles
- Redness or heat in your calf muscles

Chest pain or shortness of breath may be symptoms of a blood clot in your lung. Do not ignore these symptoms.

**Seek immediate attention at an emergency room with shortness of breath and/or chest pain.**

## Joint Replacement Infection Prevention for Invasive Procedures

For patients with a total joint replacement, the American Academy of Orthopedic Surgeons recommends antibiotic therapy for a lifetime prior to any invasive procedure. Follow the advice of your surgeon.

Some procedures for which antibiotics are recommended include:

- Dental cleaning.
- Dental repair.
- Dental extractions.
- Periodontal procedures.
- Urological procedures.
- Ophthalmic procedures.
- Vascular procedures.
- Gastrointestinal procedures.
- Colorectal procedures.
- Obstetric and Gynecological procedures.

If you have any concerns, please call your surgeon before scheduling a procedure.

Patients with total joint replacements are encouraged to maintain good oral health by performing daily brushing to remove plaque and scheduling regular professional dental care.

# The Importance of Lifetime Visits

If you have a cemented hip or knee, we need to evaluate the integrity of the cement. With time and stress, cement may crack. You probably would be unaware of this happening because it usually takes more than ten years to occur. The incidence is greater the longer the joint is in use. Seeing a crack in cement does not necessarily mean you need another surgery, but it does mean we need to follow things more closely. Why? Two things could happen. Your hip or knee could become loose and this might lead to pain. Or, the cracked cement could cause a reaction in the bone, called osteolysis, which may cause the bone to thin out. Orthopedists are constantly learning more about how to deal with both of these problems. The sooner we know about potential problems, the better chance of avoiding problems that are more serious.

If you have a plastic liner in your hip or knee, it may wear out. Little wear particles may get in the bone and cause osteolysis, causing the bone to thin out. Replacing a worn liner early can keep this from happening.

X-rays will be taken at your follow-up visits, which will help detect these potential problems. New X-rays will be compared with your older films to make these determinations.

You should generally follow up for postoperative visits as scheduled by your surgeon, annually for repeat x-rays, and any time you have mild pain for more than a week, moderate or severe pain that requires medication, or if you notice signs or symptoms of infection.



## Possible Complications

Tell your orthopedic surgeon about any medical conditions that might affect the surgery. Joint replacement surgery is successful in more than 9 out of 10 people. When complications occur, most are successfully treated.

The surgeons and staff at Western Reserve Hospital do everything possible to prevent any complications, but at times, they may occur. Complications can include the following.

### **Infection:**

Infection may occur in the incision or deep around the prosthesis. It may happen while in the hospital or after you go home. It may even occur years later. Minor infections in the wound area are generally treated with antibiotics. Major or deep infections may require more surgery and removal of the prosthesis. Any infection in your body can spread to your joint replacement.

### **Blood clots:**

Blood clots result from several factors, including your decreased mobility causing sluggish movement of the blood through your leg veins. Blood clots may be suspected if pain and swelling develop in your calf or thigh. If this occurs, your orthopedic surgeon may consider tests to evaluate the veins of your leg. Several measures may be used to reduce the possibility of blood clots, including:

- Blood-thinning medications.
- Compression stockings.
- Exercises to increase blood flow in the leg muscles.

Despite the use of these preventive measures, blood clots may still occur. If you develop swelling, redness, heat, or pain in your leg following discharge from the hospital, you should contact your orthopedic surgeon immediately. Blood clots in the leg can travel to the lung, and this can be lethal.

### **Dislocation:**

Occasionally, after total hip replacement, the ball can be dislodged from the socket. In most cases, the hip can be relocated without surgery. A brace may be worn for a period of time if a dislocation occurs. Most commonly, dislocations occur after complex revision surgery.

### **Nerve injury:**

Nerves in the vicinity of the total joint replacement may be damaged during surgery, although this type of injury is infrequent. This is more likely to occur when the surgery involves correction of major joint deformity or lengthening of a shortened limb due to an arthritic deformity. Over time, these nerve injuries often improve and may completely recover.

**Failure to heal:**

Patients with chronic disease, such as diabetics, autoimmune disorders, malnourishment, complications from smoking, and other systemic diseases may be slow to heal or not heal at all. Failure to heal may result in continued pain or subsequent surgeries.

**Blood vessel, tendon, ligament, skin or soft tissue damage:**

All of these structures must be moved out of the way to perform orthopedic surgery. In rare cases, scarring and damage may occur.

**Hematoma or seroma:**

A pocket of fluid can develop under the closed incision. This collection of fluid can give a hardness to the skin over this area. As the surgical incision heals, the body reabsorbs this fluid most of the time and the area softens. Occasionally, this fluid finds an opening in the incision and drains out. Hematomas drain dark maroon colored fluid and seromas drain a clear yellowish fluid. If a hematoma happens to drain while you are still on medication to prevent blood clots, the initial darkish fluid may be followed by bright red bleeding. If the drainage continues, notify your surgeon.

**Loss of a limb or death:**

This rarely occurs, and we assure you that the staff at WRH does everything possible to ensure you have a safe and uneventful surgical experience.



# Frequently Asked Questions

## **What are the major risks?**

Most surgeries go well without any complications. However, we do take precautions to reduce any risk. Infections and blood clots are the two risks we focus most on. To avoid these complications, we may use medications and mobilize you early. We also take special precautions in the operating room to reduce the risk of infections. Hip replacements run the risk of dislocation after surgery. Your surgeon and physical therapists will discuss ways to reduce that risk.

## **Will I need a blood transfusion?**

Although not typical, you may need a blood transfusion after surgery. Bank blood is considered safe.

## **How long does the surgery take?**

We will reserve 4-5 hours for your surgery. Some of this time is spent preparing for surgery. Actual time spent in the operating room is about 90 minutes. Additional time is spent in recovery.

## **Do I need to be put to sleep for this surgery?**

No matter what approach of anesthesia is used, you will be sedated. You may have a general, spinal or epidural anesthetic. The choice is between you and the anesthesiologist.

## **Will the surgery be painful?**

You will have pain after surgery. Some patients report this pain being more tolerable than the pain they had before surgery. And the best part; it will improve. Your surgeon, nurses and therapists will make a specific pain management plan just for you to keep you most comfortable after your surgery. Communication with your care team is important to effectively manage your pain. Early mobility in combination with pain meds will help with pain.

## **Will I need a walker after surgery?**

We recommend that you use a wheeled walker for approximately 3-4 weeks after surgery as it provides stability as you progress back to a normal walking pattern. Your surgeon or physical therapist will advise you when you are ready to discontinue using the walker and progress to a cane.

## **Will I need other equipment when I go home?**

While you are in the hospital, a member of the occupational therapy team will assess your need for any medical equipment that may assist you with safely completing your self-care tasks. Examples of equipment that may be recommended are a reacher, dressing stick, sock aid, long handled shoe horn or sponge, raised toilet seat, and tub seat or bench.

## **How long will I be in the hospital?**

Most patients are discharged the day after surgery. Remember, there are several goals to achieve before leaving the hospital.

## **Where will I go after being discharged from the hospital?**

Our goal is to get every patient directly back home. A social worker or case manager will help you with setting up home health care or outpatient physical therapy.



### **Will I need help at home if I live alone?**

Yes, you will need somebody to stay with you for at least several days. Depending on your progress, you will need someone to assist you with meal preparation, laundry, cleaning, showering, etc. It is imperative that you have a plan in place before surgery, so that your recovery can be successful.

### **Will I need physical therapy after discharge?**

Continued therapy is typically recommended at discharge from the hospital. Your inpatient therapy team will provide your surgeon with a recommendation of the type of follow-up therapy that will best benefit you. A member of the Case Management/Social Work team will assist with setting up the recommended follow-up therapy prior to discharge from the hospital.

### **How often do I need to see my surgeon?**

The frequency of follow-up visits will depend on your progress. Many patients are seen at 2-3 weeks, six weeks, twelve weeks, and then yearly. Your surgeon will let you know when to schedule your next visit.



## Notes

## Notes



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