



Welcome

Thank you for choosing the Center for Joint Replacement at WVU Medicine to help restore you to a higher quality of living with your new prosthetic joint.

Annually, over 700,000 people undergo joint replacement surgery. Primary candidates are individuals with chronic joint pain from arthritis that interferes with daily activities: walking, exercise, leisure, recreation and work. The surgery aims to relieve pain, restore your independence and return you to work and other daily activities.

The Center for Joint Replacement at WVU Medicine has developed a comprehensive planned course of treatment. We believe that you play a key role in ensuring a successful recovery. Our goal is to involve you in your treatment through each step of the program. This patient guide will give you the necessary information needed for a safe and successful surgical outcome.

Your team includes physicians, nurses, physician assistants, social workers and physical therapists with specialized training in joint care. Every detail, from pre-operative teaching to post-operative exercising, is considered and reviewed with you. The Joint Care Team will plan your individual treatment program and guide you through it.

We sincerely thank you,

WVU Medicine Center for Joint Replacement

**Center for Joint Replacement
At WVU Medicine**

The Playbook for Knee Replacements

You are scheduled for the following surgery at Ruby Memorial Hospital:

_____ on _____ (date).

Important Phone Numbers:

Orthopaedic

Nurse Clinician: Cynthia Drummond, RN, BSN 304-598-6720

Primary

Physician's Office: _____ **Phone:** _____

Orthopaedic Physician's Office:

Dr. Matthew Dietz 304-285-7444

Dr. Benjamin Frye 304-285-7444

Dr. Adam Klein 304-285-7338

Dr. Brock Lindsey 304-293-1317

Dr. Barry McDonough 304-293-1020

Dr. T. Ryan Murphy 304-285-7338

To Schedule/Reschedule Appointments: 304- 598-4830

For more information, please visit www.WVUOrtho.com

Please bring this book with you to:

- ☐ **Surgical Pre-Op Visit**
- ☐ **Pre-Op Class and appointments**
- ☐ **The Hospital on Admission**
- ☐ **All Physical/Occupational Therapy Visits After Surgery**

INTRODUCTION

We are pleased that you have chosen the Center for Joint Replacement at WVU Medicine for your joint replacement. We appreciate your confidence. The Joint Care Team will strive to provide you with the highest quality of care available.

Choosing to undergo joint replacement surgery is a decision not to be taken lightly. We realize that it is a decision that can affect the lives of you and your loved ones. Over time, we have found that a team approach to surgery provides the highest quality of care. The center of that team is you, the patient. Our goal is to surround you with quality teammates to make your surgery and recovery a success.

There are three phases to joint replacement: pre-operative, operative, and recovery. Each phase has important steps. These steps can seem overwhelming, but we think that proper preparation leads to excellent results. Different team members will assist in your care during each phase. The team consists of pre-operative nurses, operative nurses, anesthesiologists, nurse anesthetists, recovery room nurses, floor nurses, physical therapists, occupational therapists, an orthopaedic nurse clinician, and physicians. We have all undergone specialized training for your benefit.

This playbook provides an overview toward successful recovery of the phases. Every patient is unique. Every patient may not need to follow every recommendation in this guidebook. However, we encourage you to read it and feel free to ask questions. Each person will progress at their own pace, but the common goal for all patients is to improve their quality of life. Again, thank you for your confidence in us.

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General Information

ANSWERS TO FREQUENTLY ASKED QUESTIONS

Patients have asked many questions about knee replacements. Below is a list of the most frequently asked questions along with their answers. This guide provides additional information. If there are any other questions that you need answered, please ask your surgeon or the Orthopaedic Nurse Clinician. We want you to be completely informed about this procedure.



Normal Knee



Arthritic Knee



Post-Op Total Knee

What is arthritis and why does my knee hurt?

In the knee joint, there is a layer of smooth cartilage on the lower end of the femur (thigh bone), the upper end of the tibia (shin bone), and the under-surface of the kneecap (patella). This cartilage serves as a cushion and allows for smooth motion of the knee. Arthritis is a wearing of this cartilage. Eventually, the joint can wear fully through cartilage down to bone. Rubbing of bone against bone causes discomfort, swelling and stiffness.

What is a total knee replacement?

A total knee replacement is operation to remove the arthritic bone and cartilage and replace them with an artificial surface. The knee itself is not replaced, as is commonly thought, but rather an artificial substitute for the cartilage, or implant, is inserted on the end of the bones. This is done with a metal implant on the femur/tibia and plastic spacer in between and under kneecap. This creates a new smooth cushion and a functioning joint that does not hurt.

What is a partial knee replacement?

A partial knee replacement is a resurfacing procedure that replaces only the damaged portion of your knee. You are able to retain the normal, healthy cartilage and ligaments in the rest of your knee. A partial replacement is indicated when the arthritis is limited to a portion of the joint.



Partial Knee Post-Op

How good are the results of knee replacement?

Results will vary depending on the quality of the surrounding tissue, the severity of the arthritis at the time of surgery, the patient's activity level, and the patient's adherence to the doctor's orders. Most patients achieve good to excellent results with relief of discomfort and significantly increased activity and mobility.

When should I have this type of surgery?

Your orthopaedic surgeon will decide if you are a candidate for the surgery. This will be based on your history, exam, x-rays and response to conservative treatment. The decision will then be yours based on the severity of your pain and its effects on your daily life.

Am I too old for this surgery?

Older age is typically not a problem if you are in reasonably good health and have the desire to continue living a productive, active life. You will be asked to see medical physicians at the Center for Joint Replacement (Orthopaedic Medical Optimization Program (Pg 15)) to assess your general health and determine your readiness for surgery.

How long will my new knee last?

A joint implant's longevity will vary in every patient. All implants have a limited life expectancy depending on an individual's age, weight, activity level, and medical condition(s). It is important to remember that an implant is a mechanical device subject to wear and tear that may lead to mechanical failure. While it is important to follow all of your surgeon's recommendations after surgery, there is no guarantee that your particular implant will last for any specific length of time.

Why do joint replacements fail?

Just as your original joint wears out, a replacement joint will wear out over time. The most common reasons for failure are loosening of the artificial surface from the bone, infection and wear of the plastic spacer.

What are the possible complications associated with joint replacement?

While uncommon, complications can occur during and after surgery. Some complications include infection, blood clots, stiffness, implant breakage, dislocation, and premature wear – any of which may necessitate implant removal/replacement surgery. Other complications include nerve injury, foot drop, and adverse reactions to anesthesia, stroke, heart attack and death. Although joint replacement surgery is extremely successful in most cases, some patients still experience pain and stiffness. No implant will last forever; factors such as a patient's post-surgical activities and weight can affect longevity. Be sure to discuss these and other risks with your surgeon.

Should I exercise before the surgery?

Yes. You should either consult your physician, an outpatient physical therapist, or follow the exercises listed in your Playbook (Page 25). Exercises should begin as soon as possible.

When will I be able to walk?

You should be up walking the same day as your surgery. When you get to the floor after surgery, the nursing staff or rehab therapy staff will assist you in walking. Physical therapy will also work with you the next morning.

How long will I be in the hospital?

Most knee replacement patients will be hospitalized for one to two days after their surgery. Some patients may qualify for discharge from the hospital the day of the surgery. There are several goals that you must achieve before you can be discharged.

What if I live alone?

Our goal is for you to return home after your surgery. We recommend you arrange for help from a relative or friend for the immediate post-operative period. Ideally you can arrange for rides to outpatient physical therapy. If transportation is an issue

you may also have a physical therapist come to your home for two or three weeks, if needed. There is a possibility that you will require additional care, such as the services provided at an inpatient rehab hospital or skilled nursing facility. This will be discussed during your discharge planning.

How do I make arrangements for surgery?

After you and your surgeon have decided to start the surgical process, your surgeon's surgery scheduler will contact you. This may be in the office or by phone. The Orthopaedic Nurse Clinician will help guide you through the process. Both roles are described in The Playbook along with phone numbers for both.

How long does the surgery take?

We reserve approximately two to two-and-a-half hours for surgery. Some of this time is used by the operating room staff to prepare for the surgery. You will be away from your family for approximately four hours.

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

Most knee replacements at WVU are performed under spinal anesthesia. The goal of spinal anesthesia is to provide a numb leg during surgery. The anesthesia team will also administer IV sedation, as needed; you will breathe on your own which makes for an easier post-operative recovery. Occasionally your anesthesiologist may feel that general anesthesia is a better option. General anesthesia is what most consider "being put to sleep".

Will the surgery be painful?

Some pain or discomfort after surgery is normal. Our goal is to keep you as comfortable as possible. The spinal anesthesia and local anesthetics will make you comfortable the day of surgery. As this slowly wears off, other medications and modalities are available to prevent pain from becoming severe. Anti-inflammatories, Tylenol, and narcotics are medications often used after surgery.

Who will perform the surgery?

Your orthopaedic surgeon will do the surgery. One or more assistants often help during the surgery; this may include fellows, residents and/or physician's assistants. Occasionally your surgeon will be scheduled in two separate rooms. However, they will be present for your case and the two rooms will operate in a staggered fashion. If you have questions regarding this please ask.

How long and where will my incision be?

The incision will vary depending on patient size and severity of arthritis. Generally, the incision will be approximately six-eight inches long. The length of the incision will vary depending on the size of the patient, the degree of deformity, and the surgeon's preference. It will be straight down the center of your knee unless you have previous scars, in which case we may use the prior scar. There will be some numbness around the incision. This should not cause problems and will gradually resolve.

Will I need a walker, crutches or cane?

Yes. For four to six weeks we do recommend that you use a rolling walker, a cane, or crutches. Typically, most patients graduate from assistive devices over the course of six weeks. The Joint Center staff can arrange for them, if necessary.

Will I need any other equipment?

Yes. You may need a raised toilet seat or a three-in-one bedside commode. A tub bench may also be necessary. Grab bars for your shower and handrails for stairways are very helpful; these should be arranged for prior to surgery. This equipment is typically not covered by most insurances. Please check with your insurance company about your equipment benefits.

Where will I go after discharge from the hospital?

Most patients are able to go home after a one or two-day hospital stay. Some patients may qualify to return home the same day as their surgery. Rarely, some patients may benefit from transfer to a rehab facility where the average stay is seven days. Those who require transfer to a rehab facility are generally older than 85, live alone, and have little help at home. The Joint Center staff will help you with this decision and make the necessary arrangements. Your insurance company will explain your options, coverage, and payment regarding discharge plans.

Will I need help at home?

Yes. For the first several days or weeks, depending on your progress, you will need someone to assist you with meal preparation, and normal daily activities. If you go directly home from the hospital we recommend you arrange for family and friends to assist you. Preparing ahead of time can minimize the amount of help needed.

Will I need physical therapy when I go home?

Yes. You will either have outpatient or in-home physical therapy. Patients are encouraged to utilize outpatient physical therapy. If you need in-home physical therapy, we will arrange for a physical therapist to provide therapy at your home. Following this, you may go to an outpatient facility two-three times a week to assist in your rehabilitation. Occupational therapy may also be needed pending recommendations from your hospital stay. Occupational therapy may also be available for in home services.

How long until I can drive and get back to normal activities?

The ability to drive will depend on your progress after surgery. Most patients can return to driving in as little as 4 weeks. If you had surgery on your left knee, you may return to driving when you feel comfortable operating an automatic transmission vehicle and are off narcotic pain medication. However it is important to remember that there is no set timing for getting “back to normal”. Patients need to feel safe and comfortable operating a vehicle and must no longer be taking narcotic pain medication. Some patients may require more than 6 weeks before feeling safe operating a motor vehicle. Discuss the return to driving with your surgeon. Consult with your surgeon or therapist for advice on your activity.

When will I be able to go back to work?

This is a decision that you will make with your physician. Following are some general guidelines:

- Sedentary work/working from home – 7 to 10 days
- Office/Desk Work – 4 to 6 weeks
- Nursing – 6 to 12 weeks
- Warehouse work – 3 months
- Heavy labor – 3 months

How often will I be seen by my doctor following the surgery?

You will be seen daily during your hospital stay either by a resident or your staff physician. The typical follow-up schedule will be at 2 weeks, 6 weeks, 3 months, 1 year, 2 years, 5 years and every 5 years thereafter. The frequency of follow-up visits will depend on your progress.

When can I shower?

You may shower once your incision is dry for 2 days in a row. You may shower letting soapy water run over the incision. Do not rub or scrub your incision. Pat dry with a towel and redress the incision as instructed. Do not use any lotions or ointments on your incision.

When can I immerse my knee totally, such as for bathing or swimming in a pool?

Your knee can be totally immersed once your incision is completely healed. Please consult your surgeon.

When can I travel?

You may travel as soon as you feel comfortable doing so. You should get up to stretch or walk at least once an hour and stay well hydrated when taking long trips. This is important to help prevent blood clots.

When can I resume sexual intercourse?

As soon as you are comfortable. You may ask your surgeon or the Orthopaedic Nurse Clinician for a handout regarding positions that are considered safer in the early recovery period.

Do you recommend any restrictions following this surgery?

Yes. In order to extend the life of the artificial joint, you should avoid high-impact activities, such as running, singles tennis and basketball. While certain sports may place you at higher risk of any injury you may participate in doubles tennis or recreational skiing. Discuss any planned return to high energy sports with your surgeon.

What physical/recreational activities may I participate in?

You are encouraged to participate in low-impact activities, such as walking, dancing, golfing, hiking, hunting, fishing, swimming, bowling, biking and gardening.

Will I notice anything different about my knee?

Yes. You may have a small area of numbness to the outside of the scar and kneeling may be uncomfortable for a year or more. Some patients notice some clicking when they move their knee. This is the result of the artificial surfaces coming together and is not serious. Occasionally the knee may swell with activities. Some patients may have difficulty with kneeling and require a knee pad or cushion.

Pre-Operative Checklist

THE ROLE OF THE TEAM MEMBERS

The Orthopaedic Nurse Clinician will:

- Begin to assess your needs at home, including caregiver availability
- Make referrals to coordinate your discharge plan for outpatient services, home or a rehab facility
- Act as your liaison throughout the course of treatment from pre-op through admission
- Answer questions and coordinate your hospital care with Joint Center team members - You may call the Orthopaedic Nurse Clinician at 304-598-6720.

The Surgical Scheduler will:

Shortly after your surgeon's office has scheduled your surgery, you will be contacted by your surgeon's surgery scheduler who will:

- Coordinate scheduling for pre-operative joint replacement class and verify appointments for medical testing
- Help make an appointment with the Orthopaedic Medical Optimization Program (OMOP) clinic.
- Act as a liaison for coordination of your pre-operative care between the OMOP medical team, the hospital, and the testing facilities, if necessary
- Verify that you have made an appointment, with any specialists and have obtained the pre-operative tests that were ordered.

You may call your surgeons surgery scheduler at your Orthopaedic Physician's Office (see page 2 for phone numbers) or the Orthopaedic Nurse Clinician at any time before surgery to ask questions or raise concerns about your pending surgery.

Cynthia Drummond, RN, BSN, Orthopaedic Nurse Clinician
Phone Number: 304-598-6720 · Fax Number: 304-285-7365

Appointment Scheduling Office Phone Number: 304-598-4830

The Orthopedic Medical Optimization (OMOP) Team will:

- Take general medical history including current medications
- Perform general physical exam
- Determine what pre-operative testing is needed
- Determine if pre-operative assessment is needed with medical specialist
- Assess your risk of complications for the planned surgery
- They may improve your medical conditions to decrease your surgical risk
- You will be scheduled for surgery only AFTER you have been determined to have an acceptable risk for the planned surgery
- The Orthopedic Medical Optimization Program (OMOP) is there to assist you with medical problems (acute or chronic) through your recovery.

A MESSAGE FROM ORTHOPAEDIC MEDICAL OPTIMIZATION PROGRAM

As part of your preparation for Joint Replacement Surgery, you have been referred to the Orthopedic Medical Optimization Program (OMOP), which is intended to ensure the best care of patients' medical conditions during the perioperative period.

Our medical team will be performing a pre-operative assessment, and will work with you to ensure medical conditions are optimized prior to surgery and actively managed throughout your recovery. As part of this process we may recommend treatment changes, or further evaluation of current medical conditions, as well as managing any acute conditions that could develop in the perioperative period. Our objective is to navigate you safely through your surgery and recovery.

You can expect further communication from our team with regards to any testing we have ordered or changes we have recommended.

Notification and updates will also be sent to your primary care provider.

We highly encourage you to enroll in MyWVUChart as this is the most timely way for us to communicate with you, and easiest way for you to directly contact us.

You can also contact us at 304-598-4830 with any questions or concerns.

Sincerely,

Kathryn Kasicky, MD and Jami Pincavitch, MD
WVU Medicine Orthopedic Medical Optimization Team

A MESSAGE FROM CARE MANAGEMENT

As soon as you decide to have joint replacement surgery, you can look ahead and start planning for your recovery. It will be your responsibility to pre-plan for your discharge arrangements prior to your arrival for your surgery.

About two weeks before your surgery, you should plan the following:

Select a Support Person

We encourage patients to select a reliable support person or coach. It is very important that your support person be available to assist you throughout this experience. They will need to assist with transportation, preparing and assisting with meals, and assisting with mobility around your home.

Advance Directives

The law requires that everyone being admitted to a medical facility have the opportunity to make advance directives concerning future decisions regarding their medical care. If you already have advance directives, please bring copies to the hospital on the day of your surgery. If you don't, you can obtain a copy from the clinic and bring it to the hospital for notarization the day of surgery.

Contact Your Insurance Company

Before surgery you should contact your insurance company if you have questions regarding your coverage benefits. Depending on your post-operative needs, you may need a skilled nursing facility care, home health care, outpatient therapy or durable medical equipment. Contact your insurance company or Medicare provider before surgery to find out what benefits are provided with your particular plan and if there are any certain agencies or rehabilitative facilities that you would need to use. Call these preferred agencies to make initial contact and discuss their ability to provide services for you in your area.

To Guide You in Discharge Planning Options

Based on information you have obtained from your insurance company and the assessments by your therapists and doctor, one of the following will be arranged:

Home Health

If necessary a number of home health services will be arranged for you while you are in the hospital. Medicare criteria for home health coverage require the patient to be homebound.

Rehabilitative Services

Occasionally, a stay in a rehabilitation facility is helpful for your recovery. If this is the case, you will be given a choice of appropriate facilities based on your specific needs. A care manager will discuss these options with you while you are in the hospital. There are two levels of rehabilitation care:

- Skilled Nursing Rehab – This provides a less aggressive program. Insurance approval is required for admission.
- Inpatient Rehab - This requires you to be able to participate in three hours of intense daily therapies. You must meet insurance criteria for admission, which will be determined based on your progress after surgery.

Caring for Yourself at Home

Your care manager will meet with you for a post-op interview and will be in charge of coordinating your hospital discharge. The Orthopaedic Nurse Clinician, physical therapists and occupational therapists work with your physician to help you decide on the best discharge plan. They will assist you in obtaining any equipment before you leave the hospital. All equipment must be prescribed by your doctor in order for Medicare, Medicaid, and insurance companies to pay for it. However, Medicare, Medicaid, and many insurance companies DO NOT cover the cost of shower benches, elevated toilet seats, bedside commodes, grab bars, or other bathroom items. If you choose to obtain the equipment, it will become your responsibility to pay for it yourself.

WHAT TO DO

6 WEEKS BEFORE SURGERY

Start Pre-Operative Exercises

Many patients with arthritis favor their joints and thus become weaker. This interferes with their recovery. **It is important that you begin an exercise program before surgery.**

Schedule Pre-Operative Appointments

- Visit surgeon's office for final checkup before surgery, pre-operative joint class and a visit with pre-admission testing. These appointments will be scheduled by your surgeon's surgery scheduler.

Stop Smoking & Using Nicotine Products

- It is essential to stop smoking or using Nicotine products before surgery. Smoking impairs oxygen circulation to your healing joint. Oxygen circulation is vital to the healing process.

Pre-Operative Class

A special class is held for patients scheduled for joint surgery. Your surgeon's surgery scheduler will schedule this class for you two to three weeks prior to your surgery. You will only need to attend one class. Members of the team will be there to answer your questions. It is strongly suggested that you bring a family member or friend to act as your "coach". The coach's role will be explained in class. The outline of the class is as follows:

- What to Expect
- Role of Coach/Caregiver
- Meet the Joint Replacement Team
- Review Your Pre-Operative Exercises
- Learn About Assistive Devices & Joint Protection
- Discharge Planning/Insurance/Obtaining Equipment
- Complete Pre-Operative Forms
- Questions & Answers

Review "Exercise Your Right" (Appendix)

The law requires that everyone being admitted to a medical facility have the opportunity to make advance directives concerning future decisions regarding their medical care. Please refer to the Appendix for further information. Although you are not required to do so, you may make the directives you desire. **If you have advance directives, please bring copies to the hospital on the day of surgery.**

Understand the Use of DVT Prophylaxis

- DVT Definition
 - Deep Vein Thrombosis (DVT) is a condition caused by the formation of a blood clot in a deep vein. Individuals suffering from DVT may develop complications that can cause serious health problems and even death.
- Medications. These are typically prescribed for 4 weeks after surgery
 - Aspirin
 - Xarelto®
 - Warfarin (Coumadin)®
 - Lovenox®
 - Coumadin®
 - Heparin
- Non-Medication Therapy
 - Compression stockings (i.e. TED hose)

For Patients Placed on Coumadin®

- Blood tests are needed to make sure that dose is correct
- Foods with high Vitamin K content (e.g. leafy green vegetables) affect lab values
- Your doctor will determine how long you will need to stay on Coumadin

Diet/Lifestyle Reminders for Patients on Coumadin®

- Keep a consistent diet
- Limit foods high in Vitamin K to two or three times a week
- Check with your healthcare professional before starting any new medication (prescription or over-the-counter)
- Take medication at the same time every day
- Check for signs of bleeding

Complete Medication History

At your pre-operative visit:

- Bring a list of medications with name, dosage, how often you take it and the last time you took it. Please include all over-the-counter products and herbals.
- Bring the name of the pharmacy that you use and their phone number.

WHAT TO DO

4 WEEKS BEFORE SURGERY

Confirm Medical Clearance

Your surgeon's surgery scheduler will guide you through this process. Please follow their instructions. If you have any questions, please contact your surgeon's surgery scheduler.

You should have been seen by one of our Orthopaedic Medical Optimization Physicians for medical clearance and optimization. (page 15)

Obtain Laboratory Tests

Your Orthopaedic surgeon and OMOP physician will need specific tests to be done before surgery. These will be obtained before your surgery is scheduled.

Read “Anesthesia and You” (Appendix)

Joint replacement surgery does require the use of spinal anesthesia and/or general anesthesia. Please review “Anesthesia and You” in the Appendix of The Playbook.

WHAT TO DO

10 DAYS BEFORE SURGERY

Visit Your Surgeon Pre-Operatively

You should have an appointment in your surgeon's office one to three weeks prior to your surgery. This will serve as a final checkup and a time to ask any questions that you might have. Risks will be discussed and consent for surgery will be obtained.

Determine what medications to stop before surgery

This is based upon your surgeon's preference and will be discussed with you. If you are directed to do so, then seven days before surgery you should stop all anti-inflammatory medications such as aspirin, Motrin, Naproxen, etc. These medications may cause increased bleeding. If you are on Coumadin or Plavix or are taking aspirin per doctor's instruction, you will need special instructions for stopping the medication.

Prepare Your Home for Your Return from the Hospital

Have your house ready for your arrival back home.

- Clean
- Do the laundry and put it away.
- Put clean linens on the bed.
- Prepare meals and freeze them in single serving containers.
- Cut the grass; tend to the garden and other yard work.
- Pick up throw rugs and tack down loose carpeting.
- Remove electrical cords and other obstructions from walkways.
- Install nightlights in bathrooms, bedrooms, and hallways.
- If you have stairs, you may need to have hand rails installed.
- Arrange to have someone collect your mail and take care of pets or loved-ones, if necessary.

WHAT TO DO

THE DAY BEFORE SURGERY

Find Out Your Arrival Time at the Hospital

The Surgery Center will call you between 2:00 PM and 5:00 PM on the day before the surgery (or on Friday if your surgery is scheduled on Monday) to let you know what time to arrive for your procedure. Your arrival time will be two hours before the scheduled surgery to give the nursing staff sufficient time to start IVs, prep and answer questions. It is important that you arrive on time to the hospital because sometimes the surgical time is moved up at the last minute and your surgery could start earlier. If you are late, it may create a significant problem with starting your surgery on time. In some cases, lateness could result in moving your surgery to a much later time. Keep in mind that operating room times are estimates and start times are dependent on many factors. The majority of the time, we try to start all cases for the day by 3:00 PM.

Shower Prep Prior to Surgery

You will need to shower with Hibiclens (chlorhexidine) the night before and the morning of surgery. You will receive during your pre-operative visit.

Know What NPO Means – Do Not Eat or Drink

Do not eat or drink anything 8 hours before your arrival time – EVEN WATER – unless otherwise instructed to do so. Sometimes in pre-op, we may advise you to take medication with just a sip of water.

What to Bring to the Hospital

Bring personal hygiene items (toothbrush, toothpaste, deodorant, razor, and other toiletries); watch; shorts, tee shirts, loose fitting clothing; socks and tennis shoes. You won't be wearing a hospital gown after the first night. Do not bring any valuables to the hospital

SPECIAL INSTRUCTIONS

You will be instructed by your physician or the Orthopaedic Nurse Clinician about medications, skin care, etc.

You must bring the following to the hospital:

- Your Playbook
- A copy of your Advance Directive
- A complete list of medications you are taking and their dosages
- Medications that were not verified at pre-op

PRE-OPERATIVE EXERCISES, GOALS & ACTIVITY GUIDELINES

Exercise before Surgery

It is important to be as fit as possible before undergoing a knee replacement. Always consult your physician before starting a pre-operative exercise plan. This will make your recovery much faster. Six exercises are shown here that your surgeon may instruct you to start doing now and continue until your surgery. You should be able to do them in fifteen to twenty minutes, and it is typically recommended that you do all of them twice a day. Consider this a minimum amount of exercise prior to surgery.

Also remember that you need to strengthen your entire body, not just your leg. It is **very important** that you strengthen your arms by doing chair push-ups (Exercise #6) because you will be relying on your arms to help you get in and out of bed, get in and out of a chair, walk, and do your exercises post-operatively.

Stop doing any exercise that is too painful.

Pre-Operative Knee Exercises (See the following pages for descriptions)		
Exercise #1: Ankle Pumps	10-20 reps.	2 times/day
Exercise #2: Quad Sets (knee push-downs)	10-20 reps.	2 times/day
Exercise #3: Gluteal Sets	10-20 reps.	2 times/day
Exercise #4: Heel Slides (slide heel up and down)	10-20 reps.	2 times/day
Exercise #5: Straight Leg Raises	10-20 reps.	2 times/day
Exercise #6: Armchair Push-Ups	10-20 reps.	2 times/day



Ankle Pumps

1. Lie on your back or sit.
2. Point your toes up and down as far as possible.
3. Repeat 10-20 times 2x/day

Quad Sets (no towel roll)



1. Sit or lie on your back with your leg straight.
2. Press the back of your knee downward toward the bed, tightening the muscle on the top of your leg.
3. Hold 5 seconds.
4. Repeat 10-20 times 2x/day



Gluteal Sets

1. Lie on your back or sit.
2. Squeeze buttocks firmly together.
3. Hold 5 seconds.
4. Repeat 10-20 times 2x/day



Heel Slides

1. Lie on your back.
2. Bend knee up and slide heel towards body, as shown.
3. Repeat 10-20 times 2x/day



Straight Leg Raises

1. Lie on back with one leg straight, bending the other, as shown.
2. Keeping your leg straight, raise it 8-10 inches.
3. Repeat 10-20 times 2x/day



Armchair Push-Ups

1. Sit in an armchair that is against the wall.
2. Push yourself up from chair, using arms as much as possible.
3. Repeat 10-20 times 2x/day

Hospital Care

HOSPITAL CARE

DAY OF SURGERY

What to Do

Drive to Ruby Memorial Hospital and park in the Patient/Visitor Lot. Check in at the Registration Desk on 7 Northeast of Ruby Memorial Hospital. The Registration Desk staff will verify that the pre-op area is ready for you and escort you to the pre-operative holding area. Two family members may go with you and will return to 7 Northeast waiting area, where the surgeon will update them following your surgery.

What to Expect

You will be prepared for surgery in the preoperative surgical holding area. This includes starting an IV, drawing blood, and shaving/scrubbing your operative site. Your operating room nurse, as well as your anesthesiologist, will interview you. Your surgeon will mark the operative site and answer any last minute questions. The operating room staff will escort you to the operating room.

Following surgery, you will be taken to a recovery area, where you will remain for at least one to two hours. During this time, your pain will be controlled and your vital signs will be monitored. Once you have recovered from anesthesia you will then be taken to a room on 7 Northeast where a joint replacement nurse will care for you.

Only one or two very close family members or friends should visit you on this day. You will receive pain medication through your IV. You also will be given IV antibiotics for twenty-four hours and utilize a nasal sanitizer to prevent infections. You will be assisted out of bed and start walking when you arrive on the Orthopaedic Floor. It is very important that you begin ankle pumps, bed exercises on this first day and continue to do them throughout your hospital stay. This will help prevent blood clots from forming in your legs. You should also begin using your incentive spirometer or take deep breaths and make yourself cough.

HOSPITAL CARE

During your Hospital stay, the lab will come very early in the day to draw blood. This is done early in order to assist the physician in planning your care.

With the assistance of physical therapy or nursing you will be helped out of bed and begin walking. While in the hospital you will be considered a High Fall Risk. Staff will want you to wait for staff assistance before getting out of bed. You will bathe and be helped out of bed every morning. If you prefer to take your bath at night, just let your clinical associate know. They will be glad to assist you. You will dress in loose fitting clothing you've brought from home. Shorts and tops are usually best.

You need to be mentally prepared to "work" and participate in your care by doing things such as getting out of bed for your meals and participating in physical therapy twice a day. It is a good idea to request pain medication forty-five minutes to one hour before going to therapy sessions. You will be seated in a comfortable recliner whenever you are not in therapy.

Your surgeon or one of the residents will visit you in the morning. The physical therapists will evaluate you and work with you as needed to make sure you're safe to return home

Your coach is encouraged to be present as much as possible. Visitors are welcome, preferably in the late afternoon or evening.

HOSPITAL CARE DISCHARGE DAY

Your surgeon, therapists, and care managers will determine when it is safe for you to be discharged from the hospital. Nearly all of our patients are discharged to home within 1 to 2 days of surgery. Rarely patient's may require further stay in a rehabilitation facility. The decision to go home or to a rehab facility will be made collectively by you, the Joint Center Staff, your surgeon, your physical therapist, and your insurance company. Every attempt will be made to have this decision finalized in advance, but it may be delayed until the day of discharge.

If You Are Going Directly Home

Someone responsible needs to drive you. You will receive written discharge instructions concerning medications, physical therapy, activity, etc. Medications are encouraged to be obtained from WVU Medicine's discharge pharmacy prior to your departure so if there are any issues with the prescriptions we can resolve prior to you going home.

If you are going to Outpatient Physical Therapy please call and make the appointment before surgery and you will be given the prescription for that on discharge if it was not given to you before surgery at your pre-operative appointment. Take your Playbook with you.

If necessary, we will arrange for equipment and home health visits through the home health nurse. We will let you know when the home health nurse and physical and/or occupational therapists will begin their visits.

If You Are Going to a Rehab Facility

Transfer papers will be completed by the nursing staff. A physician from rehab will be caring for you in consultation with your surgeon. Expect to stay three to five days, based on your progress. Upon discharge home, instructions will be given to you by the Rehab Staff. Take your Playbook with you.

Discharge Medications

You will be discharged with several new medications in addition to your preoperative home medications. These will be reviewed by your physician and nurse prior to discharge.

1. Narcotic Pain Medications

Narcotic pain medication will be prescribed. You will be provided with **only** one prescription that should meet your pain requirements for the two week post-operative period. Given newer state laws and the dangers of narcotics, you **will not** receive more pain medication from your surgeon except in unusual circumstances.

2. Non-narcotic pain medications

Most patients will be discharged on an anti-inflammatory pain medication that will help with post-operative swelling. This medication should be taken with food to help prevent stomach irritation. You may take Tylenol (acetaminophen) along with any anti-inflammatory.

3. Comfort medications

You will also be discharged home with a medication to prevent nausea (Zofran/ondansetron) and a stool softener (senokot/colace). The nausea medication can be taken as needed, but we recommend you take the stool softener until your bowels are moving regularly.

4. Blood thinners

You will be discharged on a medication to help prevent blood clots which can be dangerous after surgery. Your physicians will decide which is best given your medical history. This medication is typically prescribed for one month after surgery.

Post-Operative Home Care

CARING FOR YOURSELF AT HOME

When you go home, there are a variety of things you need to know for your safety, your speedy recovery, and your comfort.

Control Your Discomfort

- Take your pain medicine at least thirty minutes before physical therapy.
- Gradually wean yourself from prescription medication to Tylenol (if not allergic). You may take two Tylenol in place of your prescription medication up to three to four times per day.
 - Patients with liver disease should consult with their OMOP physician or family doctor regarding the safety of Tylenol
- **Only ONE** pain medication prescription will be provided after surgery.
- Change your position every forty-five minutes throughout the day.
- Use ice for pain control. Applying ice to your affected joint will decrease discomfort, but do not use for more than twenty minutes at a time each hour. You can use ice before and after your exercise program.

Recognize Body Changes

- Your appetite may be poor. Drink plenty of fluids to keep from getting dehydrated. Your desire for solid food will return.
- You may have difficulty sleeping. This is not abnormal. Don't sleep or nap too much during the day.
- Your energy level may be decreased for the first month.
- Pain medication contains narcotics, which cause constipation. Use stool softeners or laxatives such as milk of magnesia or magnesium citrate, if necessary.

How to Take Blood Thinners

Blood thinners help prevent blood clots from developing in your legs after surgery. You will need to take a blood thinner for approximately four weeks, depending on your individual situation. The choice of blood thinner depends on your medical and family history and a number of other factors. Baby aspirin (81mg) taken twice per day is the most common medication prescribed after surgery. Your surgeon may also choose another pill anti-coagulant called Xarelto taken once per day. Other options

include injectable blood thinners like Lovenox or Arixtra. Nursing staff teach patients how to give these medications during the hospital stay.

Coumadin[®] (warfarin) is another blood thinner that you may be given. Coumadin comes in the form of a pill that must be taken once each day at the same time. The amount you take may change, depending on how much your blood thins. It will be necessary to do blood tests one to three times a week to determine this. The orthopaedic nurse clinician will contact you if your Coumadin dose needs adjusted according to your lab results. (See “Blood Thinners” in the Appendix.) Depending on the type of blood thinner prescribed, specific instructions will be explained to you by your Orthopaedic Nurse Clinician.

How to Apply Stockings

You may be instructed to wear special stockings. These stockings are used to help compress the veins in your legs. This helps keep swelling down and reduces the chance of developing blood clots.

- If swelling in the operative leg is bothersome, elevate the leg for short periods throughout the day. It's best to lie down and raise the leg above heart level.
- Notify your Orthopaedic Nurse Clinician if you notice increased pain or swelling in either leg.
- We ask that you wear the stockings for 4 weeks, 18 hours a day to both legs.

Caring for Your Incision

- Keep your incision dry.
- Change the bandage daily with dry gauze. Once the bandage is dry for two consecutive days you may leave the incision uncovered.
- **DO NOT** apply ointments or creams to the incision until cleared to do so.
- You may shower once the wound has been completely dry for two consecutive days. **DO NOT** soak your wound – No tubs, pools, spas, etc.
- Most often, your incision will be closed with absorbable sutures, skin glue and a large steri-strip.
- Notify your surgeon or Orthopaedic Nurse Clinician if there is increased drainage, redness, swelling, pain, odor, or heat around the incision, as these may be signs of infection.
- Take your temperature if you feel warm or sick. Call your surgeon if it exceeds 100.5°F after your third day post-op.

Recognize Post-Operative Swelling

Swelling is common in the lower extremities following surgery. Large patients, those with previous lower extremity incisions, or those who have problems with swelling or blood clots prior to surgery may have an increased risk for swelling. It is essential that you elevate your operative leg for twenty minute periods two to three times a day to reduce swelling and other potential complications associated with swelling. You should also assess for any blisters around the thigh.

Try to find a balance of activity and rest to keep swelling at a minimum. Take time out of your day to elevate the operated extremity, which will hinder swelling, for the first six weeks of your post-op period.

When not walking or actively working on flexion exercises, the leg should be elevated with a towel or pillow under the heel so that the knee is stretched out straight. This will help prevent a “flexion contracture” on inability to fully straighten the knee.



RECOGNIZING & PREVENTING POTENTIAL COMPLICATIONS

Infection

Infection can disrupt and delay normal recovery after total knee replacement. It is essential to monitor for signs and symptoms of infection.

Signs of Infection

- Increased swelling and/or redness at incision site
- Change in color, amount, odor of drainage
- Increased pain in knee area
- Fever greater than 100.5°F; a low-grade fever is common after joint surgery
- Incision worsening redness or heat

If you think you may have an infection, call your surgeon/Orthopaedic Nurse Clinician immediately. Antibiotics are NOT to be prescribed by anyone else.

Prevention of Infection

- Take proper care of your incision, as explained.
- Wash your hands frequently and ask people caring for you to do the same.
- Notify your physician or dentist that you have had joint replacement before having dental work/cleaning, or other potentially contaminating procedure. **This needs to be done for at least two years after surgery.** After this you need to discuss continuing antibiotic before these procedures with your surgeon. You have been given an Antibiotic Card to carry with you from now on.

Blood Clots in Legs

Having surgery can put you at risk for a blood clot. Taking blood thinners after surgery helps minimize this risk. If a clot occurs despite preventative measures, you may need to be admitted to the hospital to receive intravenous blood thinners. Prompt treatment usually prevents the more serious complication of pulmonary embolus.

Signs of Blood Clots in Legs

- Swelling in thigh, calf, or ankle that does not go down with elevation
- Pain, tenderness, redness, and firmness in the calf

NOTE: Blood clots can form in either leg.

Pulmonary Embolus

An unrecognized blood clot could break off the vein and go to the lungs or heart. This is an emergency and you should CALL 911, if suspected.

Signs of an Embolus

- Sudden chest pain
- Difficult and/or rapid breathing
- Shortness of breath
- Sweating
- Confusion

Prevention of Blood Clots

- Perform foot and ankle pumps
- Walk
- Wear compression stockings
- Take the prescribed blood thinners, such as Aspirin, Xarelto, Coumadin, or Lovenox

STRENGTHENING EXERCISES

PHASE 1: EARLY MOBILIZATION PHASE

Post-Operative Days 0-3, Hospital Stay



Ankle Pumps

1. Lie on your back or sit.
2. Point your toes up and down as far as possible.
3. Repeat 10-20 times at least 3x/day



Quad Sets

1. Sit or lie on your back with your leg straight.
2. Place a small towel rolled under your ankle.
3. Press the back of your knee downward towards the bed, tightening the muscle on the top of your leg.
4. Hold 5 seconds.
5. Repeat 10-20 times 3x/day



Gluteal Sets

1. Lie on your back or sit.
2. Squeeze buttocks firmly together.
3. Hold 5 seconds.
4. Repeat 10-20 times 3x/day



Heel Slides

1. Lie on your back.
2. Bend knee up and slide heel towards body, as shown.
3. Repeat 10-20 times 3x/day



Straight Leg Raise Supine

1. Lie on your back with one leg straight, bending other as shown.
2. Keeping the leg straight, raise it 8-10 inches off bed.
3. Repeat 10-20 times 3x/day



Knee Extensions Sitting

1. Sit in a chair.
2. Straighten your leg without lifting it off the chair.
3. Hold 2 seconds
4. Repeat 10-20 times 3x/day



Knee Flexion Sitting

1. Sit as shown.
2. Place a towel or wash cloth under the foot
3. Slide your foot on the floor and bend your knee as much as possible.
4. You may use your other leg to assist the movement, if needed.
5. Repeat 10-20 times 3x/day



Hip Flexion – Sitting Marching

1. Lift your leg off the seat 8-10 inches, keeping your knee bent.
2. Return to starting position.
3. Repeat with other leg.
4. Repeat 10-20 times 3x/day

PHASE 2: TRANSITIONAL PHASE

Post-Operative Day 4 – 2 weeks



Knee Extensions Supine

1. Lie on your back.
2. Put a rolled towel or pillow under the knee.
3. Lift your foot off the bed without lifting your thigh off the towel.
4. Repeat 10-20 times 3x/day



Knee Flexion Prone

1. Lie as shown.
2. Slowly bend knee.
3. Hold 3 seconds and slowly lower leg.
4. Repeat 10-20 times 3x/day



Hip Abduction/ Adduction Side-Lying

1. Lie on your side, supporting yourself on your elbow.
2. Roll top hip slightly forward, using top arm to support yourself in front.
3. Keeping top leg straight, lift it 8-10 inches off the bed.
4. Repeat 10-20 times 3x/day



Hip Abduction/ Adduction Supine

1. Lie on your back.
2. Slide your leg out to the side and back.
3. Repeat 10-20 times 3x/day



Hip Extension Prone

1. Lie on your stomach with pillow under hips.
2. Raise leg 8-10 inches off bed.
3. Repeat 10-20 times 3x/day



Hip Abduction/Adduction Sitting

1. Sit with a ball, pillow, or towel roll between your knees.
2. Squeeze thighs together tightly.
3. Hold 10 seconds and slowly relax.
4. Repeat 10-20 times 3x/day



Knee Extensions Stretch

1. Sit or lie down, with leg propped as shown.
2. Relax, letting the leg straighten.
3. Hold 30 seconds.
4. Repeat 3 times.



Knee Flexion Standing

1. Stand with support of a counter or your walker.
2. Slowly bend knee to lift your heel behind you.
3. Repeat 10-20 times 3x/day



Hip Abduction/ Adduction Standing

1. Stand, holding onto a solid object for support.
2. Raise leg out to the side without letting it come forward.
3. Repeat 10-20 times 3x/day



Hip Extension Standing

1. Stand at chair, counter, or walker for support.
2. Bring leg backwards 8-10 inches keeping leg straight.
3. Do not lean forward.
4. Repeat 10-20 times 3x/day



Straight Leg Raise Standing

1. Stand with legs straight holding chair, counter, or walker for support.
2. Lift leg forward, keeping knee straight.
3. Repeat 10-20 times 3x/day



Hip Flexion – Standing Marching

1. Stand at counter or walker for support.
2. Lift your knee.
3. Repeat 10-20 times 3x/day



Standing Heel Lifts

1. Stand at counter or walker for support.
2. Lift your heels off the ground.
3. Repeat 10-20 times 3x/day

Daily Living Activities

DISCHARGE INSTRUCTIONS

KNEE REPLACEMENT

General Information

- Recuperation takes six to twelve weeks; you may feel weak during this time
- Use ice for swelling and discomfort
- You may have a low-grade fever (below 100.5°F)
- NO alcohol with pain medication
- Do not drive until OK with your doctor – usually at four to six weeks
- Do not smoke/use Nicotine – it slows healing and increases your chance of infection
- Walk with your walker or crutches until your doctor says you can stop
- You may hear some clicking noises in your knee
- Your new knee may cause metal detectors to go off. You were given a joint replacement wallet card at your doctor's office.
- You may shower once your incision has been dry for two consecutive days

Pain

- You will require prescription pain medication at the time of discharge
- Take pain medication before activity and exercise
- Ice your knee for fifteen to twenty minutes after exercise periods to reduce pain
- Swelling and soreness will decrease over six to twelve weeks. However, you could have occasional swelling for up to nine months.

Exercise

- The first six weeks following surgery are critical to achieving full flexion (bending) and extension (straightening) of your knee
- Do your exercises three times a day, every day
- Walk every hour
- No high-impact, repetitive exercise, such as jumping or running

Incision

- Most patients have no stitches that need removed. If your incision was closed with staples or other stitches they will be removed two to three weeks after your surgery.
- It is normal to have some numbness around your incision.
- Expect soreness, swelling, and bruising which should improve over four to six weeks.
- If there is no drainage, you may leave the incision open to air. Place a dry dressing over your incision daily if it is draining.
- You may shower once the incision is dry for two straight days.

Medication

- You will be given a prescription for pain medication before you leave the hospital

Showering

- You may shower after your incision has been dry for two straight days. After showering, pat dry – do not rub.
- DO NOT shower if you feel weak or dizzy!
- Have someone close by when you shower in case you need assistance.
- Do not take tub baths

Sexual Activity

- Do not have sex until you are comfortable

Prevention of Constipation

- Eat fruits and vegetables daily
- Drink extra water and fluids
- Walk every hour
- Use laxatives, if needed, especially while taking narcotic medication, these will be prescribed for you

Prevention of Blood Clots

- Take your blood thinner medication as directed
- Wear elastic TED hose for four weeks, eighteen hours a day to both legs.
- Walk every hour

Signs & Symptoms of a Blood Clot

- A red, swollen, painful leg, especially in the calf area
- Swelling that won't go down with ice/elevation.

Signs & Symptoms of Infection

- Redness at incision
- Incision hot to the touch
- Increased pain and feeling of tightness around the knee
- Increase in drainage or pus from the incision
- Swelling that does not go down after elevation and ice
- Fever of 100.5°F or higher after your third post-operative day.

Prevention of Infection

The possibility of infection in your artificial joint may exist in the following situations. You were given an antibiotic card. Discuss antibiotic treatment with your doctor or dentist before any medical procedures, including:

- Any dental procedure – including cleaning of teeth
- Any biopsy or endoscopic procedure
- Any infection

CALL YOUR DOCTOR IF YOU HAVE:

- Signs and symptoms of infection
- Signs and symptoms of a blood clot
- Pain that is not relieved by pain medication
- Any questions – remember to call during office hours, whenever possible

PRECAUTIONS & HOME SAFETY TIPS



Walking with a Walker

1. Move the walker forward.
2. With all four walker legs firmly on the ground, step forward with your operative leg. Place your foot in the middle of the walker area. Do not move it past the front feet of the walker.
3. Use your arms and hands on the walker to support yourself.
4. Step forward with your non-operative leg.

NOTE: Take small steps. Do NOT take a step until all four walker legs are flat on the floor.

Car Transfers

- Push the car seat all the way back and recline it, if possible.
- Avoid sports cars and bucket seats due to low seat height.
- A plastic trash bag placed on the car seat is helpful to slide and turn on.



1. Back up to the car with your walker until you feel it touch the back of your legs.
2. Reach back for the car seat with one hand, keeping your other hand on the walker.
3. Step your surgery leg out in front of you for comfort. Duck your head as you carefully sit.
4. Turn as you lift your legs into the car, keeping a reclined position if you have a forward bending restriction.
5. Return the seat back to upright if you had reclined it.

To exit the car, reverse the process. Recline the seat, if possible. Turn and lift your legs out of the car. Keep your head down as you push off the seat back with one hand. Your other hand should be on the walker. Stand carefully and get your balance.

Stairs



- Lead up the stairs with your “good” (non-operated leg) foot first.
- Lead down the stairs with your “bad” (operated leg) foot first.
- “Up with the good, down with the bad”
- Keep a hand on the rail for balance.
- Take one step at a time. Don’t rush!



Bathing and Showering

- Your physician or nurse will advise you when you may begin to let water run over your incision. This timeframe is based on your individual condition.
- It's a good idea to use a tub bench or a seat.
- Always have a rubber mat or non-skid adhesive on the bottom of the tub.
- A hand-held shower head and long-handled sponge will make bathing easier. Using a hand-held shower head helps you direct water where you need it with less movement.
- Installing grab bars will make bathing safer.
- A liquid soap dispenser that can be tied to the bench keeps soap handy.



1. Place the bench or seat in the tub facing the faucets.
2. Back up to the tub until you can feel it on the back of your knees. Be sure you are right in front of the seat.
3. Reach back with one hand for the seat. Keep the other hand on the walker.
4. Sit down carefully on the seat. Step your surgery out in front of you for comfort. Place the walker within reach, but out of the path of your legs.
5. Lift your legs into the tub as you turn on the seat.
6. To get out, reverse the process. Turn on the seat as you lift your legs over the side of the tub. Push on the seat with one hand. With the other hand on the walker, stand up outside the tub. Take hold of the walker and get your balance.

Toileting

Following surgery, it may be recommended that you use a toilet riser for comfort and easy of toilet transfers.

To Use a Standard Riser:

1. Back up to the toilet until you feel it touching the back of your knees.
2. Keep one hand on the walker while you reach back with the other hand for the edge of the riser.
3. Step your surgery leg out in front of you for comfort and lower yourself to the seat.
4. Reverse the process for getting up. Place one hand on the walker and the other on the edge of the riser. Be sure to get your balance before taking the walker.

To Use a Riser with Arms:

1. Back up to the toilet until you feel it touching the back of your knees.
2. Be sure you have your balance. Reach back for the armrests with both hands.
3. Step your surgery leg out in front of you for comfort and lower yourself to the seat.
4. Reverse the process for getting up. Use the armrests to push up with. Be sure to get your balance before taking the walker.



Getting Dressed

A reacher or dressing stick will be helpful to dress your operated leg.



To Get Dressed

1. Use the hook of the dressing stick or the claw of the reacher to catch the waistband.
2. Lower the garment to the floor. Slip the garment over your operated leg first, and then put on the other leg.
3. Pull the garment up over the knees with the dressing stick or reacher before taking hold of the waistband with your hands. Keep underwear at this position and repeat the process for your pants.
4. Stand at your walker. Once you are balanced, pull the garment(s) the rest of the way up.

To Get Undressed

1. Back up to a chair or bed. Unfasten pants and push them off your hips. Do the same with underwear. Let them fall to the floor if they will.
2. Step your surgery leg out in front of you for comfort and sit down
3. Take your unrestricted leg out first. Take garment(s) off the operated leg last, using a reacher or dressing stick.



Using a Sock Aide

1. Sit in a chair. Slide the sock onto the sock aide. The toe should be stretched tight across the end. The heel should be at the back of the plastic. The top of the sock should not be pulled over the top of the plastic piece.
2. Bend your knee as much as possible. Hold onto the cords and drop the sock aide by your foot.
3. Slip your foot into the sock aide.
4. Straighten your knee, point your toes and pull the sock on. Keep pulling on the cords until the sock aide pulls out.
5. To remove socks, use the hook of your dressing stick. Hook the top of the sock toward the back of the heel and push to sock off your foot.

Using a Long Handled Shoe Horn

Sturdy, slip-on shoes and shoes with Velcro closures or elastic laces are easiest. No high heels or backless shoes should be worn.

1. Bring your shoe close to your foot using a reacher, or shoe horn.
2. Place the shoe horn inside the shoe at the back of the heel.
3. Recline, if needed, to lift your leg and place your toes into the shoe.
4. Slide your heel down the shoe horn as you press your foot down into the shoe.
5. The shoe horn, reacher, or dressing stick can be used to hold your shoe while you pull your foot out of it.



HOUSEHOLD CHORES

SAVING ENERGY & PROTECTING YOUR JOINTS

- DO NOT get down on your hands and knees to scrub floors. Use a mop and long-handled brushes.
- Plan ahead! Gather all of your cooking supplies at one time.
- Place frequently used cooking supplies and utensils where they can be reached without too much bending or stretching.
- To provide a better work height, use a high stool or put cushions on your chair when preparing meals.



SAFETY & AVOIDING FALLS

- Pick up all throw rugs and tack down loose carpeting. Cover slippery surfaces with carpets that are firmly anchored to the floor or that have non-skid backs.
- Be aware of all floor hazards, such as pets, small objects, or uneven surfaces.
- Provide good lighting throughout your home. Install nightlights in bathrooms, bedrooms, and hallways.
- Keep extension cords and telephone cords out of pathways. DO NOT run wires under rugs – this is a fire hazard!
- DO NOT wear open-toed slippers or shoes without backs. They do not provide adequate support and can lead to slips and falls.
- Sit in chairs with arms – it makes it easier to get up.
- Rise slowly from either a sitting or lying position so as not to get light-headed.
- DO NOT lift heavy objects for the first three months, and then only with your surgeon's permission.
- Stop and think. Use good judgment.

DOS & DON'TS FOR THE REST OF YOUR LIFE

Whether they have reached all of the recommended goals in three months or not, all joint replacement patients need to have a regular exercise program to maintain their fitness and the health of the muscles around their joints. With both your orthopaedic and primary care physicians' permission, you should be on a regular exercise program three to four times per week lasting twenty to thirty minutes. High-impact activities, such as running and singles tennis, may put too much load on the joint and are not recommended. High-risk activities, such as downhill skiing, are likewise discouraged because of the risk of fractures around the prosthesis. Infections are always a potential problem and you may need antibiotics for prevention.

What to Do in General

- Take antibiotics one hour before having dental work or other invasive procedures. **This needs to be done for at least two years after surgery.** After this you may discuss with your surgeon continuing antibiotic before these procedures. You have been given an Antibiotic Card to carry with you from now on in your playbook.
- Although the risks are very low for post-op infections, it is important to realize that the risk remains. A prosthetic joint could possibly attract bacteria from an infection located in another part of your body. If you should develop a fever of more than 100.5°F, you should notify your doctor. If you sustain an injury, such as a deep cut or puncture wound, you should clean it as best you can, put a sterile dressing or Band-Aid on it, and notify your doctor. The closer the injury is to your prosthesis, the bigger the concern. Occasionally, antibiotics may be needed. Superficial scratches may be treated with topical antibiotic ointment. Notify your doctor if the area is painful or red.
- Your joint replacement may set off security alarms at airports, malls, sporting venues, etc. This is normal and security is used to seeing patients with internal hardware/joint replacements. You may carry a card that explains you have a joint replacement. There is one in your playbook for your convenience.
- When traveling, stop and change position hourly to prevent your joint from tightening.
- See your surgeon annually, unless otherwise recommended.
(See “The Importance of Lifetime Follow-Up Visits” in the Appendix)

What to Do for Exercise

Choose a low-impact activity, such as:

- Recommended exercise classes
- Home program, as outlined in Patient Guide
- Regular one to three mile walks
- Home treadmill
- Stationary bike
- Regular exercise at a fitness center
- Low-impact sports, such as golf, bowling, walking, gardening, dancing, etc.

What Not to Do

- Do not run or engage in high-impact activities.
- Do not participate in high-risk activities.

Appendix

Put Your Health Care Decisions in Writing

It is the policy of WVU Medicine that all patients have the right to sign and submit advance directives which indicate the patient's desire regarding the treatment the patient wishes to have administered, withheld, or withdrawn, should the patient's condition render him/her unable to make such decisions for himself/herself.

What Are Advance Medical Directives?

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

There are different types of Advance Directives:

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

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

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

On admission to the hospital, you will be asked if you have an Advance Directive. If you do, please bring copies of the documents to the hospital with you so they can become part of your Medical Record. Advance Directives are not a requirement for hospital admission.

Lay Caregiver

The hospital is required by law to offer patients the opportunity to appoint a lay caregiver during inpatient admissions. If you choose to appoint a lay caregiver, the hospital is required to contact the lay caregiver prior to discharge and issue a discharge plan that describes the patient's after-care needs. If you do not wish to appoint a lay caregiver at this time, you can modify that decision at any point during your hospital stay.

If you would like more information or forms for completing a Living Will, Appointment of Health Care Agent, or Health Care Instructions, please contact:

Cynthia Drummond, Orthopaedic Nurse Clinician

Phone Number: 304-598-6720 · Fax Number: 304-285-7365

What types of anesthesia are available?

Decisions regarding your anesthesia are tailored to your personal medical history and preferences. The two broad categories are regional(spinal) and general anesthesia, which are discussed in more detail below.

Regional Anesthesia (Spinal)

Some of the proven advantages of choosing regional anesthesia as part of your anesthetic plan include better post-operative pain relief, less narcotic use, faster time to rehabilitation and recovery, less nausea and vomiting after surgery, and improved patient satisfaction.

As with any type of surgical or medical treatment, side effects are possible. For regional anesthesia, these include incomplete pain relief, soreness or bruising at the needle site, or tingling that lasts for days. Spinals and epidurals can cause headaches approximately 1% of the time. Serious complications that can occur, but are very rare, include bleeding, infection, and nerve injury.

There may be certain surgeries or medical conditions where it is better to avoid some types of regional anesthesia or even to use general anesthesia instead. Many times, there are very important surgical or medical reasons to recommend regional anesthesia. With any type of regional anesthesia, you will receive medications through your IV to help sedate you in the operating room and prevent pain and anxiety. You will have the opportunity to discuss your anesthetic options with your anesthesiologist.

Peripheral Nerve Blocks

Depending on the particular operation, a needle is placed along the path of the nerves that go to the hip or knee. Numbing medicine is injected to provide hours of pain relief.

Periarticular Injections

A needle is used during surgery to inject a mixture of medicines into the muscles and soft tissues around the joint. The mixture contains medicines to help with numbing the joint, as well as decreasing inflammation, bleeding and swelling.

General Anesthesia

With general anesthesia, the patient is unconscious and has no awareness or other sensations. There are a number of general anesthetic drugs. Some are gases or vapors inhaled through a breathing mask or tube and others are medications introduced through a vein.

During all types of anesthesia administration, you are carefully monitored, controlled and treated by your anesthesia care team, who use sophisticated equipment to track all of your major bodily functions. When you are under general anesthesia, a breathing tube is typically inserted through your mouth into the windpipe to maintain proper breathing during this period. The length and level of anesthesia is calculated and constantly adjusted with great precision. At the conclusion of surgery, your anesthesia care team will reverse the process and you will regain awareness in the recovery room.

Will I have any side effects?

Your anesthesiologist will discuss the risks and benefits associated with the different anesthetic options, as well as any complications or side effects that can occur with each type of anesthesia. Nausea and/or vomiting may occur, but is less of a problem when regional anesthesia is used. Medications to treat nausea and vomiting will be given, if needed. The amount of discomfort you experience will depend on several factors, especially the type of surgery. We attempt to treat pain after joint replacement surgery using a multimodal approach – that is; we use a variety of different techniques including numbing blocks along with oral and IV medications. Despite our best efforts, we cannot guarantee a completely pain-free experience; however, we do hope to minimize your pain as much as possible so that you can begin rehabilitation and recovery quickly.

What will happen before my surgery?

You will meet your anesthesiologist on the day of your surgery. Your anesthesiologist will review all information needed to evaluate your overall health, including your medical history, laboratory test results, allergies, and current medications. Any remaining questions you may have will be answered at this time. Usually, you will have your regional anesthesia placed under intravenous (IV) sedation in a monitored holding area prior to moving to the operating room. In the holding area, you will meet a nurse and an acute pain physician who will help with the sedation and placement of regional anesthesia. You will meet the rest of your anesthesia care team and then you will be transported to the operating room.

During surgery, what does my anesthesiologist do?

Your anesthesiologist is responsible for your comfort and safety before, during and immediately after your surgical procedure. In the operating room, the anesthesiologist will manage vital functions, including heart rate and rhythm, blood pressure, body temperature, and breathing. The anesthesiologist is responsible for fluid and blood replacement when necessary.

What can I expect after the operation?

After surgery, you will be taken to the Post Anesthesia Care Unit (PACU). You will also be given IV pain medication, if needed. You will be watched closely by specially trained nurses. During this period, you may be given extra oxygen and your breathing and heart functions will be monitored closely. An anesthesiologist is available to provide care as needed for your safe recovery.

HOME

If an oral blood thinner is prescribed, such as Xarelto or Aspirin, then no labs will be needed.

If you are prescribed an injectable blood thinner, you will receive education on self-injection.

If you are discharged home with home health services and you are taking Coumadin, the home health nurse will come out two times a week to draw your blood for a prothrombin time. The home health nurse will call these results in to your physician, whose nurse will call you to adjust the dose of your Coumadin, if necessary.

If you do not use home health nursing, then you will have to go to an outpatient medical lab, usually at your local hospital, to have your blood drawn. These arrangements will be coordinated by the Case Manager before you leave the hospital.

REHAB

If you are transferred to a rehab facility, the monitoring will be done one to two times per week. The physician caring for you at the rehab facility will adjust the blood thinners as necessary. When you are discharged from rehab, home health or outpatient blood monitoring will be arranged by the rehab staff, if necessary.

THE IMPORTANCE OF LIFETIME FOLLOW-UP VISITS

After performing many joint replacements, we have discovered that many people are not following up with their orthopaedic surgeon on a regular basis. The reasons for this may be that they don't realize they are supposed to, or they don't understand why it is important.

So, when should you follow up?

These are some general rules:

- The typical follow-up schedule will be at 2 weeks, 6 weeks, 3 months, 1 year, 2 years, 5 years and every 5 years thereafter. The frequency of follow-up visits will depend on your progress.
- Anytime you have mild pain for more than a week.
- Anytime you have moderate or severe pain that requires medication.

The reason for follow-up visits with your orthopaedic surgeon is that the plastic liner in your knee may wear. Wear particles may get cause the bone to thin out. Replacing a worn liner early can keep this from happening.

X-rays taken at your follow-up visits can detect these problems. Your new x-rays can be compared with previous films to make these determinations. This should be done in your doctor's office. If you are unsure of how long it has been since your last visit or when your next visit should be scheduled, call your doctor.

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