Knee Replacement Surgery Patient Information Manual

Maximizing Your New Knee(s)





UF HEALTH REHAB CENTER – SHANDS HOSPITAL

UFHealth.org/shands-rehab-center-orthopaedics-and-sports-medicine-institute www.rehabcenters.UFHealth.org

INTRODUCTION

Welcome to UF Health! Thank you for choosing us for your knee replacement surgery. Our premier orthopaedic surgery team will take great care of you.

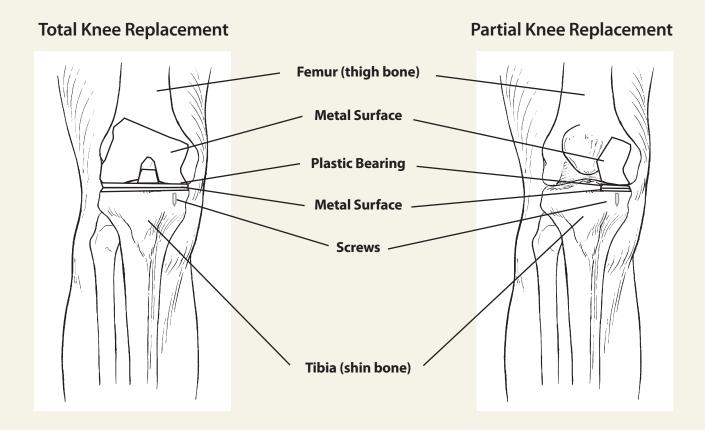
The University of Florida Orthopaedic Surgery program began in 1960 as a division of the College of Medicine Department of Surgery. In 1975, the Division of Orthopaedic Surgery achieved full departmental status. Our UF Health Orthopaedics and Rehabilitation team has earned a reputation for excellence in research, teaching and clinical care. Our commitment to patient health care motivates every aspect of our efforts, from the bedside, to the classroom, to the research lab.

Your doctor has explained your procedure and what to expect following surgery. The purpose of this guide is to provide you with more information about what to expect during recovery, what you can do to prevent any complications and how you can maximize your outcomes. Although the health care team will assist you in your recovery, **you and your family** are the most important members of the team. We believe knowledge and preparation before and after the operation will make your recovery easier. If you have questions along the way, be sure to ask them. We are here to help you achieve your goals and we want you to be satisfied with your entire experience. Our goal is **excellent service**, from start to finish.

So, let's begin.

YOUR "NEW" KNEE

Your doctor has explained how your painful knee will be replaced with an artificial knee joint called a prosthesis. The prosthesis is designed to work in the same way as your natural knee. There are two types of knee arthroplasty: **total knee arthroplasty** and **unicompartmental arthroplasty**. You need to ask your orthopaedic surgeon the difference between the two and who qualifies for the different types. Your surgeon will carefully choose the best type of prosthesis for you. Some patients will need a total knee arthroplasty or a partial knee replacement while others may have both knees operated on at the same time. The pictures below show the parts of the prosthetic knee.



Your new knee will function like a door hinge. Like the natural knee, the prosthesis will give you smooth, pain-free movement. A prosthesis will be inserted to "replace" your deteriorated joint areas. The prosthesis is custom-fit to you by your surgeon. You will need to do exercises to strengthen your muscles and give your knee time to heal. In addition, you will be taught exercises that make all of the muscles surrounding your knee stronger and will increase the movement of your knee. You should not attempt to kneel for at least six weeks following surgery. The amount of discomfort will be your guide for how much kneeling you can do after that time.

ANSWERS TO SOME FREQUENTLY ASKED QUESTIONS ABOUT TOTAL KNEE SURGERY

Are there any major risks?

Most surgeries go well with no complications. There are two serious complications that are most concerning – infection and blood clots. To avoid these, antibiotics are used during and after surgery as well as blood thinners. Special precautions are taken in the operating room to reduce the risk of infection.

Will I need blood?

You may need to receive a blood transfusion after surgery. The blood bank is very safe, but if you want to use your own blood, please discuss this with your surgeon months before surgery. For more information about blood transfusions, please read the section in this booklet.

How long will I be in the hospital?

Most knee patients are in the hospital two to three days after their surgery. There are several goals that must be met before you go home.

What if I live alone? Will I need help at home? Where will I go after I am discharged from the hospital?

For your safety, you can't stay alone after you leave the hospital due to risk of falls while on pain medication, as well as your recent anesthesia and surgery. Most patients are able to go home directly after discharge from the hospital with assistance from family or friends. You may also have a home health nurse and physical therapist assist you at home several times a week, but you still need family or friends to be there to help with meal preparation, bathing and other household activities for several days or weeks depending on your progress. Case management will follow you in the hospital and help you with this decision and make the necessary arrangements. You may go to a rehab facility (inpatient rehab hospital or skilled nursing facility that specializes in rehab). We recommend checking with your insurance company ahead of time so you are aware of what they will and will not cover with regards to rehabilitation.

Will I need equipment before I go home?

YES. You will either be using a walker or crutches when you go home. The physical therapist, physician and case manager will help you decide which is safest and how long to use each device. A three-in-one bedside commode might be needed. Equipment that is recommended for your home may be covered by insurance. The case manager will secure these items for you before discharge. Additional items, such as a tub bench and grab bars in the tub or shower, may be helpful. However, insurance companies will not pay for them or the installation. These items would be best purchased and installed before your surgery.

ANSWERS TO SOME FREQUENTLY ASKED QUESTIONS ABOUT TOTAL KNEE SURGERY (continued)

Will I need physical therapy when I go home?

YES. Home care physical therapy or outpatient physical therapy will be discussed with you and arranged by the case manager while you are in the hospital. In most cases, home care physical therapy is set up for three visits a week for two weeks. Then, you will likely go to outpatient physical therapy. Outpatient physical therapy is usually three times a week. The length of time required for therapy varies with each patient. Outpatient PT is desirable as this encourages you to get up and get moving and gets you out into the community. You can choose the clinic you would like to attend, so look for one that will provide the excellent care you require for your rehabilitation.

When will I be able to drive?

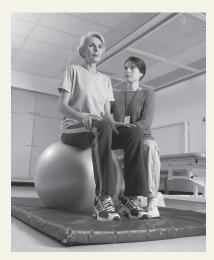
The ability to drive depends on whether surgery was on your right or left leg and the type of car you drive. If you had your left knee operated on and have an automatic transmission, you could be driving after three weeks. If you had your right knee replaced, it could be five to six weeks before you can drive. **You cannot drive while taking pain medication; it is against the law.**

Do you recommend any restrictions following surgery?

YES. High impact activities such as running, tennis and basketball are not recommended, and kneeling on your new knee is strongly discouraged.

Will I notice anything different about my knee after surgery?

YES. Your knee could be swollen for three to six months after surgery. You may notice some clicking noise when you walk; this is normal and is the result of the artificial surfaces coming together. You may have some numbness on the outside of your scar which may last for a year or more, but this is not serious. You may have soreness in your knee for three to six months after surgery; this will go away.



WEIGHT-BEARING PRECAUTIONS

You will be instructed and educated about how much weight you may place on your leg. Follow your weight-bearing instructions from your surgeon and physical therapist.

- Weight-bearing as tolerated (WBAT) indicates that you may place as much weight as you are comfortable with on your operated leg. Your physical therapist will also instruct you on proper techniques.
- Partial weight-bearing (PWB) allows you to place 20-40 pounds of pressure on your operated leg.
- Touchdown weight-bearing (TDWB) allows you to place 5-10 pounds of pressure on your operated leg.
- Non-weight-bearing (NWB) indicates that you may not place any weight at all on your operated leg.

During your hospitalization, physical therapists will teach you how to properly follow weightbearing instructions. Please maintain your weight-bearing status as instructed until your surgeon tells you otherwise.

SAFETY PRECAUTIONS: WALKER AND CRUTCHES

To help prevent injuries and accidents, follow these guidelines:

- Remove all throw rugs and plastic runners from walkways in your home.
- Remove or tape down extension cords.
- Stay off wet or waxed floors, ice and grass.
- Wipe off wet crutch or walker tips.
- If you must travel over a slick surface, take short and purposeful steps.
- Use the elevator when possible; avoid escalators.
- If you have pets, be careful not to trip over them.
- If you must use the stairs, use stairs with sturdy handrails. (If your home has stairs, discuss this with your physical therapist during your hospital stay for problem-solving tips and practice if needed.)

Walker tips:

- When getting up from a chair or toilet, do not use the walker for support. Push off of the armrest or seat with your hands.
- Once standing, place both hands onto the walker handles. Keep your head up and look straight ahead.
- Stand up straight.
- When walking, use the wheels on the front of the walker to move you forward. (If it has wheels, glide it like a grocery cart.)

ACTIVITIES AND EXERCISE

You will be expected to learn and follow your exercises as you recover. The successful outcome of your surgery will depend on how much you take responsibility for your own care and rehabilitation. The goal is to return to as much independence as possible and perform your own daily activities.

Here are some general rules to follow:

- Let pain be your guide when moving your leg or hip.
- Use chairs with armrests to help you stand up and sit down.
- Always push up from the surface you are coming from. Do not lean and pull on walker.
- Avoid waterbeds.
- Avoid low, soft sofas and chairs. If necessary, add firmness to low or soft chairs by using pillows or folded blankets.
- Use your walker or crutches as instructed.
- **Do not drive** until you are cleared by your surgeon's office. You may ride in a car but try to keep the trips to less than one hour. If longer trips are necessary, you may need to take breaks each hour. **Under no circumstances are you to drive while on pain medication.**
- **Do** complete safe transfers as instructed by physical therapy.
- **Do not** kneel on your operated knee until your surgeon says it's okay.
- **Do not** participate in any sports for six weeks.

CPM - Continuous Passive Motion machine

We occasionally use a CPM machine. Depending on your surgeon's post-op orders, the physical therapist may apply a CPM machine to your knee while you are in the recovery room or after you get to the floor following your surgery. Your operative leg will be supported in this machine, which slowly bends and straightens your knee. The purpose of this machine is to aid in gaining motion of the new knee joint. The range of motion will be increased on a daily basis by the physical therapist and he/she will show you how to increase the range of motion as approved by your surgeon. The machine is often used for six to eight hours a day. **The machine is not sent home with you**; we want you to move your knee yourself without relying on a machine.

Exercises

Your physical therapist will also teach you and your family exercises to strengthen your muscles and increase your knee motion. It is very important that you do these exercises at least twice a day. This will start by the second day after your surgery and will continue for six weeks. A copy of these exercises is provided in this booklet so you can become familiar with them prior to your surgery. If your knee is not too painful, you may begin the exercises before surgery. It will help in your recovery after surgery.

ACTIVITIES AND EXERCISE (continued)

Control of Swelling

Another important factor in your recovery will be controlling any swelling you might have. The better the swelling is controlled, the easier it will be for you to move and strengthen your knee.

- Apply a cold pack/wrap to your knee for twenty minutes following all exercise and every four hours if you are in a lot of pain.
- Wrap your leg with an Ace[®] wrap or wear the TED hose you received at the hospital.
- When sitting, place a pillow under your calf (not under your knee).

Use of ice at home:

The use of ice after knee surgery has the following purposes:

- > To decrease swelling and the sensation of warmth in your knee
- > To relieve pain, especially following exercise
- To relieve muscle spasms

Tips for applying ice:

Apply ice in a warm, comfortable environment. Even though you are only icing your knee, your whole body can feel colder. **Do not apply ice for more than 20 minutes at a time.**

Different ways to apply ice:

- Fill a large sealable freezer bag halfway with ice, and then add water to cover the ice. Close the bag securely to prevent leaking. Wrap the bag in the towel and apply to knee.
- Use a commercially available gel cold pack. Wrap in a towel and apply to knee.
- To make your own reusable cold pack, take a sealable freezer bag and fill with one part water and two parts rubbing alcohol. Do not fill bag to its maximum. Place in freezer and wait until it forms a gel-like consistency. Wrap in a towel and apply to knee.
- To use the commercial cold wraps (if one was sent home with you from the hospital), fill the container with ice and water to the fill line inside the container. Connect the wrap to the unit by snapping the connectors together. Then plug the connector into the unit and then into the wall.

Precautions

Care must be taken when using ice to avoid freezing the skin. Keep the incision dry by never putting the ice bag/wrap directly against the skin. Always use a washcloth or towel first against the skin.

Ambulation

Your physical therapist will teach you to walk properly with a walker or potentially with crutches, depending on your needs. The assistive device will help you walk and take weight off your operative leg so that your muscles can recover. It is important that you do not plant your leg and twist or turn your knee joint; this could damage your muscles and the stability of the joint. You will learn to walk on flat surfaces and then on steps.

ACTIVITIES AND EXERCISE (continued)

Walking with crutches:

Posture

- Keep your head up with your eyes focused about ten feet in front of you and your weight on your hands (**not** on your armpits).
- > Your elbows should press the crutch tops against your ribs.
- When turning on crutches, keep the crutches in front of you and take small steps.
 Do not turn with your foot on the floor.

Stairs:

The phrase "Good goes to heaven, bad goes down" will help you remember which leg goes first.

Going up

- Balance on crutches with weight on your hands
- Push on crutches
- Start up the step with the non-operative leg ("good goes to heaven")
- Step up with the operated leg
- Once balanced, bring crutches up to step

Going down

- Hold operated leg out in front of you
- Position toes of the non-operative foot over the edge of the top step
- Lower crutches down to the next step, keeping your weight on your hands
- Step down with operated leg ("bad goes down")
- Step down on the heel of your non-operative foot, lowering your body between the crutches and bending the hip and knee of your non-operative leg

Come to a firm balance after each move. Avoid quick moves to prevent falling.

The Robert Jones Dressing

After knee surgery, your physician may request a special dressing be placed on your leg. For some physicians, the Jones dressing is used post-operatively for two days to apply gentle pressure to the limb to help control swelling and bleeding.

If you have this type of wrap on your leg, you will not be doing as much bending of your knee as the dressing will restrict this. You can work on straightening and lifting your operative leg, and you should be doing exercises that your therapist will show you.

The Jones dressing is usually removed within 48 hours of surgery, and you can perform range of motion exercises (as you are able) until the dressing is removed.



HOSPITAL CARE

This section is just a brief summary of what your hospital stay will be like. There are always exceptions.

DAY OF SURGERY

- You will have remained NPO (no food or water allowed) before surgery.
- You will be taken to an area called pre-op holding or to the block room.
- Your family will be shown where the waiting room is and where the doctor will find them after your surgery.

In the pre-op area or block room the following may occur:

- An IV line will be started to replace fluids during the surgery.
- A Foley catheter will be inserted into your bladder **in the operating room after you are asleep.** This will remain inserted for approximately 24 hours.
- Sticky patches, called electrodes, will be placed on your body to monitor your heart rhythm and function.

In the operating room:

- The anesthesiologist will be there monitoring your vital signs and will give you medication to make you sleep.
- When you are asleep, a breathing tube will be inserted into your throat. This tube will be breathing for you during surgery. The anesthesiologist will be monitoring this and will remove the tube as soon as your lungs wake up and you are breathing on your own. This tube may leave your throat a little sore.

DAY OF SURGERY

Depending on your surgeon, you may be fitted with a device called a CPM which provides continuous passive motion. Your surgeon determines length of time and range of motion.

FIRST DAY AFTER SURGERY

There will be a lot that happens the first day after surgery. Your Foley catheter will be taken out, you will begin working with physical therapy, and you will begin taking oral pain medication. Make certain you communicate with your care team about your level of pain and do not wait until the pain has worsened before asking for medication.

Working with physical therapy and moving your knee actively throughout the day is very important (if you are cleared to do so). The physical therapist will teach you about any special precautions and specific exercises for your knee. Your nurse can also help you with your mobility, and you will need assistance whenever you move from the bed, chair or toilet.

Sit up in your chair as much as possible. You are expected to work on seated knee-bending while you are up, with the goal being 90 degrees of bend.

HOSPITAL CARE (continued)

SECOND DAY AFTER SURGERY

You will work with physical therapists twice today. Most IV lines and blocks will be removed. You can begin to walk with nursing staff or family **if** your therapist feels you are safe. The more you walk and are out of bed, the faster your recovery will be. Occupational Therapy will be working with you to determine any additional equipment needs you might have, as well as practicing going up and down uneven surfaces such as curbs or steps in preparation for the outside world. You could be discharged home today if you are medically stable and have met your rehab goals. Strive to get home day two. Work hard and stay active.

THIRD DAY AFTER SURGERY

This day's events are similar to day two, but you should be up, hopefully dressed in regular clothes, and moving about in your room. This is discharge day for **most** patients who have done well with physical therapy. The majority of patients will go home, to rehab or to a skilled nursing facility. The case manager, rehab team and your doctor will have discussed a safe and appropriate discharge for you to maximize your function and safety. Your follow-up care will be established and information provided to you.

IF YOU ARE GOING DIRECTLY HOME

Someone responsible needs to drive you. **You cannot drive yourself home.** Before you arrive and are admitted to the hospital, please arrange for someone who will drive you home. You will receive written discharge instructions from the nurse and possibly the case manager concerning medications, therapy, activity, precautions, etc. Take this information home with you.

IF YOU ARE GOING TO A REHAB FACILITY

The decision to go to a rehab facility will be made in collaboration with you, the case manager, your surgeon, physical therapist and your insurance company. Every attempt will be made to have this decision finalized prior to your discharge day, but sometimes this gets delayed until the day of discharge. Someone responsible needs to drive you or we can help you arrange for transportation if needed. Transfer papers will be completed by nursing staff and the case manager. A physician from the rehab facility will be caring for you in consultation with your surgeon. Your length of stay is determined by your progress. Upon discharge, home instructions will be given to you by the rehab staff.

DISCHARGE INFORMATION

KNOW the discharge language...

Patients, family caregivers and health care providers all play roles in planning for discharge. It is a significant part of the overall care plan that many patients and caregivers do not understand. Careful attention to the discharge plan and post-hospital care can help ensure your surgery is successful.

Many types of post-hospital care are not covered under insurance. Insurance type and medical recommendations both play a role in the final discharge plan. Medical staff, case managers and physical therapists can recommend the appropriate level of care. Insurance policies direct care based on coverage and contracts with companies. This can impact your choice of facility and the amount of care you are eligible to receive.

After joint surgery, patients are discharged to a variety of locations based on their general state of health, how will they recover from surgery, their assistance at home, and insurance policies. Inpatient Rehab Hospitals are facilities such as UF Health Shands Rehab Hospital or Brooks Rehabilitation in Jacksonville, Florida. To be admitted to these types of facilities, you need a recommendation from physical therapy for intensive therapeutic management of three or more hours per day, and have medical needs that require a doctor's ongoing supervision. Most orthopaedics-planned joint replacements do not discharge to these types of facilities. Medicare, Medicaid and some private insurance companies cover this type of care. Many private insurance companies have a very limited benefit for this type of care.

Skilled facility, subacutes, skilled nursing facilities or extended care facilities

To be admitted to these types of facilities, you need a recommendation from the physical therapist for sub-acute rehabilitation. These facilities have both short-term recovery areas and long-term residential areas where patients receive care. These facilities have physical therapists, occupational therapists, separate therapy "gyms" to assist with rehabilitation; they also provide nursing care, custodial care and can accommodate a longer stay for patients. Many orthopaedics-planned joint replacements discharge to these types of facilities. Patients that need additional assistance with walking, more time to recover from surgery, have stairs/steps, live in a difficult-to-reach area or live alone are often discharged to a sub-acute facility. Medicare and private insurances cover this expense. However, most private insurances or Medicare advantage plans require you to go to a facility in their network and a co-payment.

DISCHARGE INFORMATION (continued)

Home Care

Home care is a visit by a medical professional, including a visit by a nurse, physical therapist or occupational therapist. All planned joint replacements receive some type of home care to assist with mobility. You will be asked to choose a home care agency.

Medicare and private insurances often cover this expense, however, there may be restrictions on the company that your insurance allows you to choose from. You will be provided with a list of companies that are available within your network.

Durable Medical Equipment

Durable medical equipment, or DME, includes walkers, wheelchairs, crutches, bedside commodes and other items to assist with your mobility and care. Most insurance cover the above items. However, they do not cover specialty items such as shower chairs, slide boards or hand rails.

Outpatient Rehab

Outpatient rehab is therapy that you will receive in an outpatient clinic. Most insurances cover this service, although you may have a limited choice or service area that you must choose from.

PAIN CONTROL

Many patients are concerned about pain after surgery and how well it will be controlled. There are many factors that affect how much pain you will experience. For example, the temperature of the room, how tired you are and how stressed you are can all affect postsurgery pain. Everyone experiences pain differently. Your pain will be controlled to a level that is tolerable for you. Orthopaedic staff members are experienced in helping patients in pain to be more comfortable.

What kind of pain medications will be used?

There are many different ways to take pain medication, whether through pills, intravenously, a patient-controlled analgesia or PCA pump or through a special catheter placed in your back, an epidural, or leg, a femoral nerve sheath.

When you switch to pain pills, they will be ordered PRN, which means "as needed." This means you must ask the nurse for pills. The doctor's order for pain medication will have a time restriction. For example, a patient may only receive pills every three to four hours. It is important for you to plan on taking your pain medications around your physical therapy schedule. Most patients prefer to take the pills about 30 minutes before beginning their physical therapy.

Although pain medications are necessary, they sometimes cause bothersome side effects. Be alert for any of these side effects and tell your nurse right away.

- Dry mouth
- Itching
- Nausea and/or vomiting
- Constipation
- Decreased appetite
- Urinary retention

Pain medication also can cause severe drowsiness or confusion. Although this is rare, we will be watching for these side effects and change your medication if they are seen.

Comfort Measures

There are many other ways that you can control pain and feel more comfortable. We will remind you of these when you are in the hospital.

It is important you tell us any time you feel you are not getting enough pain relief. BE AWARE that we cannot get rid of all your pain; you will have some discomfort.

PAIN CONTROL (continued)

If you have a backache:

- Raise the head of your bed about half way
- Ask us to roll a towel and place it under your lower back
- Shift your weight or move your legs
- Use the trapeze on your bed to move around

If you feel spasms in your leg:

Tighten and release thigh and buttock muscles. Your physical therapist will show you how to do these isometric exercises.

You may have ice bags placed over your dressing or a cold wrap incorporated into your total knee dressing. It is important not to get your incision wet, so ask us to help you do this. Don't lie in a wet bed if the ice bag leaks. Please tell your nurse or personal care attendant so your bed can be changed.

Let us know how you are feeling. We will help you find a more comfortable position as best we can.



ANESTHESIA AND YOU

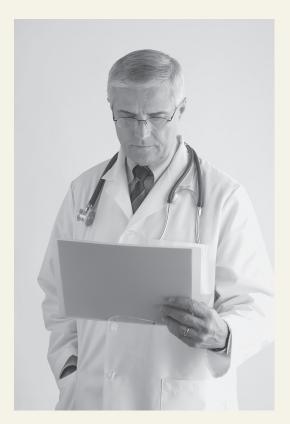
You will see an anesthesiologist and/or an anesthesia nurse practitioner before your surgery. He/she will review your medical history and perform a brief physical exam.

The anesthesiologist will discuss with you the options you have for anesthesia during your surgery. Keep in mind your anesthesiologist may suggest a particular anesthetic technique based on your history, physical exam, type of surgery and other factors.

General Anesthesia – renders you unconscious and unable to feel pain during your procedure. It is produced by a combination of drugs and gasses.

Spinal Anesthesia – a small needle is used to inject an anesthetic solution into your back. This medication should take away all pain sensation and movement from the abdomen down to your toes. You also will be sedated (light sleep) so that you are comfortable and relatively unaware of your surroundings.

Epidural Anesthesia – also involves using a needle to inject the medication into the lower back. With the epidural, a small catheter is placed through the epidural needle and used to have continuous painkiller medication while in surgery and for a few days after surgery. The anesthesiologist might suggest a combination of the above techniques.



MANAGING SURGICAL PAIN WITH NERVE BLOCKS

Discuss with your physician what he/she feels is the right choice of analgesia for you.

Leg surgery: Femoral nerve blocks

Femoral nerve blocks are used for surgery on the thigh and knee. The block numbs the nerve that transmits signals from much of the front and sides of the thigh and knee. This nerve is relatively close to the skin in the groin area and runs down the leg. A separate block of the sciatic nerve is usually required to fully numb the back of the thigh and lower leg. The sciatic block will be done in much the same way as the femoral nerve block.

Here's how the femoral nerve block is typically given:

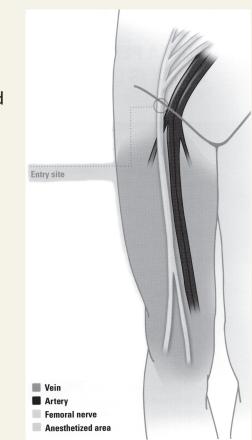
- > The skin around entry site is cleaned and numbed.
- The anesthesiologist locates the nerve painlessly with nerve stimulator and needle – you may feel a slight tingling sensation or muscle twitch.
- He or she then delivers nerve-blocking anesthesia.
- If continuous infusion is planned for long-term pain control, a small catheter will be inserted and connected to a small portable pump.
- Numbness lasts up to 12 hours with a single dose or until the continuous infusion catheter is removed.

Following surgery, you'll need to take special care of your leg until sensation fully returns.

When will I be given a nerve block, and how is it done?

The block is administered in the Anesthesia Block room just before surgery.

First, the anesthesiologist numbs the skin with local anesthesia, inserts a stimulating needle, and then uses a small hand-held machine called a **nerve stimulator**. The nerve stimulator sends a low-level electrical signal into your tissue below the skin that helps pinpoint the precise nerve location. The signal will cause a painless muscle twitch, and possibly a tingling sensation. Next, the anesthesiologist gently inserts a very thin catheter (as small as a piece of angel hair pasta) to the nerve location and injects the precise amount of anesthetic needed.



CARE OF YOUR INCISION

During surgery, your incision will be closed with metal clips called staples or a special type of glue. You will have a large bulky dressing or your knee will be wrapped from toes to upper thigh with an Ace wrap for two days. The bulky dressing will be taken down on the second day after surgery and a lighter gauze dressing will be applied. We will watch for any signs of bleeding or infection and keep your incision dry by changing the dressing as needed.

You may have a drain called a Hemovac/Autovac. It will be removed the first day after your surgery. You may feel a brief burning sensation when the drain is pulled out. You will receive antibiotics through your IV as long as the drain is in to prevent infection.

Your dressing should be changed whenever it has drainage on it. The nurse will show your family or caregiver how to change the dressing before you leave the hospital. Hands should be washed before changing the dressing. Avoid touching your incision until it is healed. If home care is set up for you by the case manager, the home care nurse will also reinforce how to change the dressing.

If you have staples, they will be removed 10-14 days after surgery. Special strips (Steristrips) will be placed over your incision at that time. Your staples are removed by a nurse in the home care setting or by another health care provider.

You may shower two days after the staples come out – **NOT BEFORE THEN**. Pat your incision dry after you shower.

The Steristrips may fall off on their own after a few days. If not, you may gently peel them off after five to seven days. Your incision may feel itchy, drain clear fluid or feel numb, all of which are normal.

Your incision also may be closed with special surgical glue or sutures. If closed with glue, you may shower **AFTER THREE DAYS**, but do not scrub, soak or clean your incision line. Only use clean water on your incision to avoid the possibility of dissolving the glue.

Examine your incision every day for signs of infection. If you can't see your incision, look in a mirror or have someone else look at it. If you see any signs of infection, call your doctor's office.

Signs of infection are:

- Swelling
- Increased pain or tenderness
- Redness and heat
- Drainage (other than clear, reddish-yellow fluid)
- Fever

When your incision has no open areas or scabs, you can massage with a water-based lotion (approximately four weeks after surgery).

PREVENTION OF BLOOD CLOTS

Patients who have hip or knee surgery are at risk for developing blood clots in their legs, which can be dangerous if they break away and travel to the lungs. There are several things you can do to decrease the chances of blood clots forming. When you are lying in bed after surgery, it is very important that you begin leg exercises (see examples in booklet). These can be done by pressing the backs of both knees into the bed, tightening your calf and thigh muscles and moving your ankles up and down. Your physical therapist can show you how to do these exercises properly. It also is important that you get up into the chair and start walking as soon as possible (with assistance).

You will wear special elastic stockings (TED hose) that help to circulate the blood in your legs. They will be placed on your legs right after surgery in the recovery room and you will need to wear them the entire time you are in the hospital. Depending on the surgeon, you might need to wear these TED hose for several weeks post-surgery or until you post-operative clinical visit. In order for the stockings to help, it is important that they fit properly. They should feel a little tight, yet smooth without wrinkles or creases. They should not be cut or rolled down. (Remember, you can't put these in the dryer, so air-dry them and wash in cold water. We will remove them to wash your legs every day and check to make sure your skin is healthy.) Wear your TED hose after you go home until there is no tendency for your legs to swell, usually around 10 days.

You will also be wearing a sequential compression device that helps circulate the blood in your legs. Sequential compressions are cloth sleeves attached to a pump that hooks onto the end of your bed. Air is then pumped into the sleeve through the hoses and then released.

You might also receive medications to help prevent blood clots, especially if you have had blood clots in the past. If you are prescribed Coumadin[®], it is important that your blood is checked every day (while in the hospital) until the desired blood lab value is obtained. If your doctor keeps you on Coumadin[®] after you go home, you will need to have your blood values checked once or twice a week. These tests will be planned for you before your discharge from the hospital. In addition, you will receive dietary instructions from the dietician since some foods may affect your Coumadin[®] level.

Aspirin, heparin and Lovenox[®] (enoxaparin) are other drugs that help prevent blood clots. If your doctor prescribes one of these drugs, you will receive proper instructions at that time.

Blood clots can be a very serious complication after having knee surgery. It is important that you stick to your prescribed medication in order to decrease your chances of blood clots. It is important to get up and move often. You should not sit longer than one hour at a time.

Although blood clots are rare, it is important to know the signs and symptoms to look for:

- Pain in your lower legs or swelling not relieved by lying down and putting your legs up
- Heat and redness in the calf muscle area

You should notify your doctor immediately if you have any of these symptoms. If you become short of breath or develop chest pain, you need to call 911. It is important that you see a doctor as soon as possible.

DIET

Good nutrition – including eating a balanced diet high in protein and calories – is essential for proper wound healing. **Do not diet** while you are healing from your surgery. If you are diabetic, you will be put on a diabetic diet to keep your blood sugar under control. People with diabetes take longer to heal and the more your blood sugar is kept under good control, the faster you will heal. If you have food allergies or are a vegetarian, please let the doctor know at pre-op. If you have questions about your diet, please ask your nurse or doctor. At your request, a dietician can speak with you. Depending on your dietary restrictions, your family may bring food into the hospital for you to eat.

PREVENTION OF CONSTIPATION

Pain medication and anesthesia can be constipating, so your doctor may prescribe stool softeners or laxatives after surgery. Passing gas is normal and lets us know that your bowel function is starting to come back, so don't be embarrassed by this. If you haven't had a bowel movement by the second day post-op, please ask your nurse to give you a laxative. If you normally have problems with constipation, let the doctors know what works best at home so we can try and do the same for you in the hospital.

BLOOD TRANSFUSIONS

Before your surgery, your doctor will talk to you about blood transfusions. Your blood values will be closely monitored after surgery. If they fall too low, your doctor may order a blood transfusion. If you have already donated your own blood at the local blood bank, this blood will be used for you after surgery. Using your own blood (autologous donation) is the safest type of blood transfusion; however, all donated blood is thoroughly tested for many things, including hepatitis and HIV. If it is not safe for you to store your own blood for surgery, your doctor will discuss this with you.

Autotransfusion is another type of transfusion where the blood from your surgical wound is collected in a special drain and given back to you through your IV the day of surgery.

PREVENTION OF PNEUMONIA

Coughing and deep breathing exercises are very important to help prevent pneumonia. Your nurses will ask you take long, deep breaths several times each hour and to cough up any mucous. You will be taught to use a device called an incentive spirometer that will help you with your deep breathing exercises. A nurse will show you how to use this before surgery or right after surgery. To help prevent lung problems, remember to stay active with the assistance of a nurse.

If you smoke, quitting before surgery will help your recovery and decrease your chances of getting pneumonia. Smoking is not allowed after surgery while you are in the hospital.

A PATIENT'S PERSPECTIVE

Surgery will hurt, but it doesn't compare to the 24-hour-pain you have been dealing with that led you to have surgery in the first place. Our health care team is dedicated to helping you recover and maximize your new joint.

Your experience with us important, so please let us help you make your stay a satisfying one.

You will be up and moving right after surgery, perhaps the same day of surgery, so be ready.

You will be using an assistive device, such as a walker or crutches initially, so expect that when you are getting up.

You need to increase your activity and exercise and be out of bed more than in it while staying with us. Getting dressed is allowed, so feel free to bring loose-fitting clothes that can easily be donned over a bulky knee dressing or immobilizer.

Expect to go home day two or three of your stay with us. This is normal. You will have continued therapy outside of the hospital if your insurance offers this benefit.

You will need to continue your exercises at home, walking frequently and staying active. You will have pain medicine to help should you need it.



YOU ARE YOUR BEST COACH. STAY ACTIVE. BE FIT.

GETTING READY FOR SURGERY

What should I expect prior to surgery?

When your surgery was scheduled, you received a packet that included this booklet and a general information sheet about surgery at UF Health Shands Hospital. You will be asked to get a clearance letter from your family doctor or internist. This clearance is very important, and it is your responsibility to obtain the clearance letter and make sure that we receive it before your pre-op day at the clinic. If you have lab tests, EKGs or chest x-rays, we need to have those results in the clinic on the day of your pre-op. If you do not get the clearance, your surgery will be cancelled. If you have a cardiac condition, you must have your cardiac doctor clear you for surgery.

Please bring all your medications that you take with you to the pre-op clinic. If you don't bring them, make sure you have a list of all medications that you take both over-the-counter (such as aspirin, Motrin[®], vitamins, and herbal remedies) and prescribed medications with dosages and how often you take them. The correct medication and dosages are important so we can maintain your health throughout your hospital experience.

You will be talking to a nurse case manager either pre-op or post-op who will assist you in obtaining any equipment or services needed after discharge from the hospital. They follow you while you are in the hospital.

Please be aware that not all insurance pays for inpatient rehab, outpatient rehab, home care rehab, etc.

If you have questions or concerns about where you will be discharged to after leaving the hospital, our case manager would be happy to help you. Please call our clinic and ask to speak to the case manager for your doctor. If you get the case manager's voice mail, please leave your name, your doctor's name, your phone number and what type of surgery you will be having and when. A case manager will call you back and talk to you about discharge plans.

What happens on the pre-op testing day?

Prior to your surgery date, you will be scheduled to come to the orthopaedic clinic and the pre-operative anesthesia clinic. At this time, a complete history and physical will be done to be sure you are in the best condition for surgery. A chest X-ray and EKG may be done and blood may be drawn. The surgeon and anesthesiologist will explain the surgery and the anesthesia plan to you and your family, answer any questions, and have you sign the operative and anesthesia permits. **Be sure to ask all of your questions.**

WHAT SHOULD I BRING TO THE HOSPITAL?

- Sturdy slip-on shoes with rubber soles or bedroom slippers with closed toe and heel
- A copy of your Living Will (if you have one)
- Comfortable, loose fitting clothing
- Your personal hygiene items
- This booklet
- List of questions to ask before having surgery

List of questions:

Bring this sheet with your questions to pre-op so you can remember to ask the doctor, nurse or anesthesiologist what you want to know and address any concerns you may have.

Please DO NOT bring valuables (money, watch, jewelry, cell phones) with you. If you wear a wedding ring or band, it will have to be removed before surgery. Please leave your valuables at home. The hospital cannot be responsible for your items.

INFORMATION SHEET

Welcome to UF Health. You are scheduled to have an elective knee replacement in the near future, and we want to give you some information on what to expect day-by-day in regards to your post-operative care.

Nursing and Rehab staff follow a specific care plan established by your physician for elective joint patients. This guideline standardizes how we offer care to our elective joint patients and allows all stakeholders to know what to expect each day in regards to your care progression.

[]	
 Mobility Goals: Edge-of-bed sitting or out of bed as able Walking as able with assistive device Begin circulation exercises: Ankle pumps Quad sets Gluteal sets 	You will be up and moving if your physician orders it as early as today. Nursing or therapy can help with this. You will be instructed on any specific precautions you have following this surgery. You can begin circulation exercises as soon as you are alert to do so. You will not have your knee propped on a pillow; it will lay flat on the bed. This keeps your knee in the best alignment. You should see signs in your room that give information on your mobility status, and "Call, don't fall," which means, ask for help and don't get up alone. You likely have a trapeze bar on your bed. You can use this to off-load pressure on your bottom, but don't rely on it for mobility. You won't have a bar at home so we practice out of bed without it. You may have ice or a cooling unit for your knee. You will have a catheter for a short time after surgery, but it will be removed first thing in the morning so you can start walking to the bathroom.

INFORMATION SHEET (continued)

DAY OF SURGERY (continued)	You will have a knee immobilizer on your knee if you have a nerve block. Once the block is gone the immobilizer is not used. You will have a device on your calves that will that will help maintain adequate circulation to the legs.
 FIRST DAY AFTER SURGERY Mobility Goals: Ambulate at least 20 feet with assistive device Sitting up in chair for meals Ambulate to bathroom as able for toileting with assist Bend your knee in sitting at least 60 degrees Active motion or active assisted motion ideal 	Catheter should be removed. If you have an epidural, you may still have the catheter a little longer. You will be out of bed with therapy and multiple times today. You will be sitting up in the chair for all your meals. You are expected to walk 20 feet with your walker or crutches. You will have help for out-of-bed activity. You will start working on exercises designed to strengthen your new knee. Do these both in and outside of your therapy sessions. You should be bending your knee at least 60 degrees today, and working hard to get your knee as straight as possible when you extend it. Exercises should be done at least twice daily, one time with your therapist and another with your family member or on your own.
 SECOND DAY AFTER SURGERY Mobility Goals: Walking increased distances, out of bed for all meals, step training 	Discharge today is possible. Motion of the knee should approach 80 degrees of flexion. Extension should be close to full. Walking in the hallway for 50 plus feet with a walker or crutches.

INFORMATION SHEET (continued)

SECOND DAY AFTER SURGERY (continued)	You will practice going up and down uneven surfaces (steps). Exercises at least twice today.
 THIRD DAY AFTER SURGERY Mobility Goals: Ambulation in hallway and bathroom Get dressed Stay out of bed 	Discharge today is likely. Knee motion should be approaching or at 90 degrees of flexion. Walking in the hallway should exceed 100 feet with an assistive device. Exercises should be done independent of therapy and family member assisting if present. Master uneven surfaces. Out of bed should be independent of trapeze. Getting dressed if able.
Discharge note	You will likely have some form of follow-up therapy. You should perform your home exercise program at least twice a day on your own or with family assistance. You should be trying to bend and straighten your knee as much as possible. You should not be wearing the immobilizer at home unless instructed to do so. You should be walking often. Monitor for clinical signs of infection: fever, swelling, increased pain, redness, etc.

Thank you for choosing UF Health for your elective surgery. We wish you years of comfortable mobility.

BILATERAL KNEE SURGERY

Simultaneous bilateral total knee replacement

If you have both knees equally painful and stiff, it is possible to have both knees replaced with total knee prostheses during one operative procedure, under one anesthesia. The operations are followed by a single rehabilitation period within one hospital stay. Such simultaneous surgeries are called simultaneous bilateral total knee replacement.

Risks of performing a bilateral procedure

There can be complications to any procedure. A bilateral knee operation can increase your need for blood transfusion, has a higher rate of post-operative complication than single knee surgery, and will likely require an inpatient rehab stay versus going home directly.

If you are overweight, get short of breath easily and are not physically fit prior to a bilateral knee, you may have difficulty with your post-operative recovery. Plan to discuss the pros and cons with your physician before choosing bilateral surgery.

What can I expect?

Be ready to work hard. We usually place knee immobilizers on both legs for support and stability on the first day post-op. If you have a nerve block, you will have immobilizers until the block is discontinued. You will need help getting up with two knee braces on, as functionally we need to have our knees

bent to shift our weight forward for leverage. You can still walk or get up to a chair with knee braces on. Rehab will likely ask you to lead with your weaker (or more painful) limb to initiate mobility. The immobilizers are usually removed once the block is gone.

Your anesthesiologist will place femoral nerve catheters into both legs. A pain-relieving drug will be pumped into each catheter by a special pump that regulates the amount of drug you receive. These catheters will stay in place until several days after your surgery and the dosing will be determined by the anesthesia pain management team. Your pain will not be totally relieved by the femoral nerve blocks but they will they will make your pain much more controllable with oral or intravenous (IV) medications. Since pain medications are given "as needed," it is up to the patient to request pain medications when needed and in anticipation of therapy.

Nerve Blocks

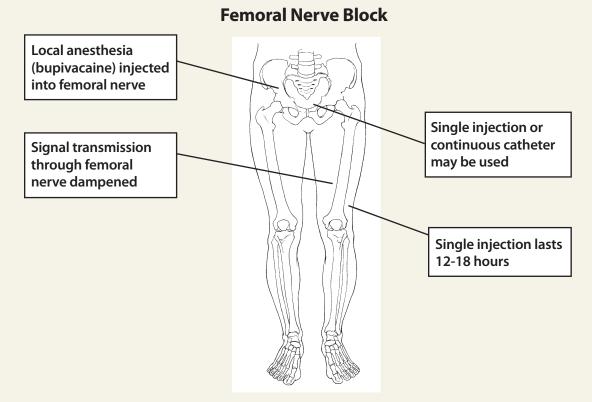
A side effect of the femoral nerve pain block is the temporary loss of quadriceps muscle control. The quadriceps muscle is the muscle that allows you to extend your knees and stand. After surgery you will be fitted with knee braces to enable you to stand with your walker for the first few post-op days. It is very important for your safety that you not try to walk or stand without these braces or without the help of therapy or nursing staff until the femoral nerve block is removed.





Typical knee immobilizer

BILATERAL KNEE SURGERY (continued)



Physical therapy will be ordered twice a day after surgery in order to begin your return to normal movement. Your nurses are trained to assist you out of bed, and your family can help you with the exercises included in this packet.

Rehab after surgery is hard work; patients are expected to participate in exercises and training designed to speed recovery and limit complications.

If your physician chooses CPMs for your rehab, you will be required equal wear-time on both knees. That may mean on/off cycles, or alternating flexion (while one knee is bending, the other is straightening), and simultaneous wear. Your therapist will work with you on this.

If your knee is having difficulty extending all the way, you may have a pillow placed under your ankle **(never under the knee)** to allow gravity to passively stretch the area. We do not allow pillows under the knee for "comfort" as this can cause your knee to get stiff with a slight bend in it.

Acute goals for bilateral total knee replacement are:

- 1. Early mobilization with out of bed activities designed to overcome the effects of anesthesia and improve circulation. It is *expected* that every patient will spend some time out of bed in a chair on post-op day 1.
- 2. Training in the use of an assistive device for transfers, walking and steps.
- 3. Training the patient and caregiver in range of motion and strengthening exercises that will speed your recovery.

A day-by-day summary of what to expect is included in this packet.

GENERAL THERAPY TIPS



BECOME A REHAB STAR. Remember to get up and MOVE.

Your post-surgical pain is temporary. You have been dealing with joint pain for a long time, so you know that you can get through the post-operative period.

Your new knee is waiting for you. You can do it!

- Ask for help to get up as often as you can.
- Exercise outside of therapy to maximize outcomes.
- Do not place a pillow under your knee. Always promote a straight leg by putting the support under the calf.
- Strive to achieve your daily goals.
- Be safe, get help, and prevent falls.
- Get your family involved.

TOTAL KNEE ARTHROPLASTY HOME EXERCISE PROGRAM

Do the following exercises 2-3 times a day. Do 10 or more repetitions of each.

1. ANKLE PUMPS

Make up and down motions with your feet, or point and flex your foot.

2. QUAD SETS

Keep your legs out straight and toes pointed up. Tighten the muscles in the front of your thigh and press your knee down. Hold for a count of 5, then relax.

3. GLUTE SETS

Tighten your buttocks by squeezing together, hold for a count of 5, then relax.

4. BRIDGING

Place a roll under your knees. Press down on the roll with your thigh and lift your buttocks. Lower slowly.

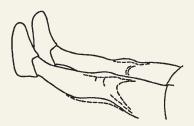
5. TERMINAL KNEE EXTENSION

With the roll under your knees, lift your foot until your leg is straight; hold and lower slowly.

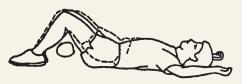
6. HEEL SLIDES

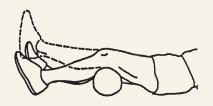
Bend hip and knees, bringing heel towards buttocks, then push out until leg is straight. Remember not to bend the hip past 70 degrees.













TOTAL KNEE ARTHROPLASTY HOME EXERCISE PROGRAM (continued)

Do the following exercises two to three times a day. Do 10 or more repetitions of each.

7. ABDUCTION

With leg out straight, slide the leg out away from your body, then pull leg back in.

8. STRAIGHT LEG RAISES

Bend the opposite knee. Do a guad set, then lift leg 12" without letting your knee bend, then lower slowly.

9. Sit in a chair with your foot propped in another chair and knee unsupported for 15 minutes to maintain knee extension.

10. KNEE EXTENSIONS (Very important! Work hard at seated flexion)

While sitting in a chair, bend involved leg back as far as you can; use unaffected leg to assist for more knee flexion, then kick out straight. For more flexion, scoot bottom edge of chair with foot planted.

- 11. After exercises, ice knee for 15 minutes, observing incisional precautions.

12. Ambulate with your ______ observing a weight-bearing of ______.





ON THE MOVE

How many times have you gotten up today?

FACT: Staying in bed does not get you home more quickly, and it DOES NOT make you stronger.

FACT: Prolonged bed rest can cause:

- Increased risk of bed sores, blood clots and pulmonary embolism
- Pneumonia
- Exercise intolerance, weakness and changes in blood pressure
- Decreased bone density and muscle mass
- Constipation
- Depression or a sense of helplessness

SO, WHAT CAN I DO TO HELP MYSELF OR MY LOVED ONE?

- Get out of bed for meals.
- Walk with or without assistance as directed by your physician/nurse/therapist.
- Have slippers with good grips and backs on them for out of bed mobility and activities.
- Make sure you have your glasses and hearing aids.
- Avoid daytime sleeping so a normal sleep cycle is maintained.
- Keep blinds open during the day.
- Encourage use of incentive spirometer for deep breathing. Ask your nurse for information.
- Do any exercises assigned to you outside of your therapy sessions.



FOUR THINGS YOU CAN DO TO PREVENT FALLS

Begin a regular exercise program

Exercise is one of the most important ways to lower your chances of falling. It makes you stronger and helps you feel better. Exercises that improve balance and coordination (like Tai Chi) are the most helpful.

Lack of exercise leads to weakness and increases your chances of falling.

Ask your doctor or health care provider about the best type of exercise program for you.

Have your health care provider review your medications

Have your doctor or pharmacist review all of the medications you take, even over-the-counter medications. As you get older, the way medicines work in your body can change. Some medications, or combinations of medications, can make you sleepy or dizzy and can cause you to fall.

Have your vision checked

Have your eyes checked by an eye doctor at least once a year. You may be wearing the wrong glasses and need your prescription updated or have a condition such as glaucoma or cataracts that limits your vision. Poor vision can increase your chances of falling.

Make your home safer

About half of all falls happen at home. To make your home safer:

- Remove things you trip over (like papers, books, clothes and shoes) from stairs and places where you walk.
- Remove small throw rugs or use double-sided tape to keep the rugs from slipping.
- Keep items you use often in cabinets you can reach easily without using a step stool.
- Have grab bars put in next to your toilet and in the tub or shower.
- Use non-slip mats in the bathtub and on shower floors.
- Improve the lighting in your home. As you get older, you need brighter lights to see well. Hang light-weight curtains or shades to reduce glare.
- Have handrails and lights put in on all staircases.
- Wear shoes both inside and outside the house. Avoid going barefoot or wearing slippers.

Ask your nurse or therapist to help you up as much as possible.

PUBLIC PROGRESS REPORT

Record your progress and track your accomplishments

You can track your progress each day in the hospital with this.

	SAT UP IN CHAIR	GOT UP TO THE COMMODE	WALKED 30 FEET WITH ASSISTANCE	WALKED GREATER THAN 30 FEET	DID MY EXERCISES
	☐ Breakfast ☐ Lunch ☐ Dinner Extras? (time)	☐ Breakfast ☐ Lunch ☐ Dinner Extras? (time)	☐ Breakfast ☐ Lunch ☐ Dinner Extras? (time)	 □ Breakfast □ Lunch □ Dinner Extras? (time) 	 □ Breakfast □ Lunch □ Dinner Extras? (time)
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