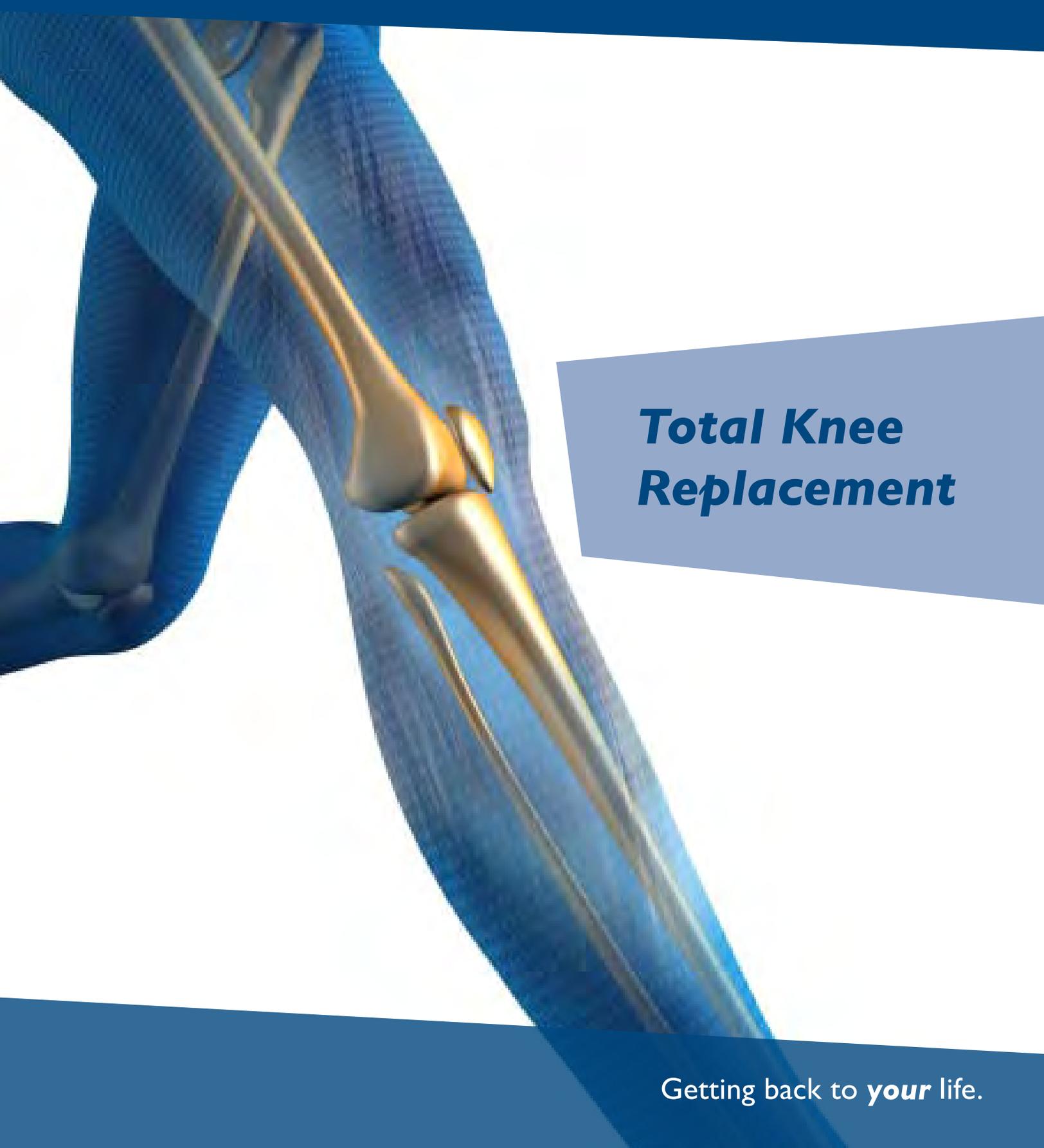




OrthoVirginia

Patient Education Manual



***Total Knee
Replacement***

Getting back to ***your*** life.

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Welcome

Dear Joint Replacement Patient,

The physicians and staff at OrthoVirginia are pleased that you are considering us for your total joint care. Every year over 1800 joint replacement surgeries are performed by OrthoVirginia surgeons. We are committed to providing quality medical care and excellent service to each individual patient to ensure the best possible outcome from their total joint surgery.

We would like to take the time to briefly discuss the process of undergoing total joint surgery. Your physician has discussed the indications for surgery and the criteria that must be met prior to your total joint replacement. This manual is designed to offer additional information on your preparation before surgery, the surgery itself, and the road to recovery after your procedure.

Please use this manual as your guide and feel free to contact our office if you have any questions. (A pre-operative checklist stating the steps is included in the packet on page 8.)

Preparing for Surgery:

1. **TOTAL JOINT EDUCATION CLASS:** You will receive a schedule for the Total Joint Class from your designated hospital if offered. We ask that you attend one of the classes at your convenience prior to your surgery. The classes can be fun, are very informative, and provide answers to many basic questions regarding total joint replacement before, during, and after hospitalization.
2. **MEDICAL CLEARANCE:** Schedule an appointment with your primary medical doctor at least 14 days prior to your surgery date. Your primary care doctor will be ordering appropriate lab tests in order to optimize your medical status. A form letter detailing those tests is included in this packet and can also be faxed to your primary medical doctor.
3. **DENTAL CLEARANCE:** Your surgeon may ask that you have clearance from the dentist to ensure that you have no infections or problems with your teeth that could postpone your surgery and to minimize dental procedures immediately after your surgery.

4. **ANESTHESIA CONSULTATION:** The pre-op department at the hospital will review your medical history with you. Depending on the facility, they may complete a telephone interview or ask that you visit the pre-op department at the hospital. At that time, the anesthesiologist will review the various options for anesthesia during your surgery. The anesthesia team will work with your surgeon to determine the most appropriate pain management approach for you during and after surgery.
5. **CURRENT MEDICATION LIST:** It is very important for you to keep your home medication list up-to-date and that you provide a copy to each of your health care providers. We have included a blank medication form in the packet on page 7 and recommend that you make multiple copies to give to your physician and the hospital on the day of surgery.
6. **OUTPATIENT PHYSICAL THERAPY:** Please contact an outpatient physical therapy facility as soon as your date for total joint surgery is scheduled. We encourage our total joint patients to begin physical therapy as soon as possible before and after surgery. Your surgeon may recommend that you begin therapy prior to surgery to help build strength and confidence. OrthoVirginia has multiple physical therapy locations for your convenience or you may select another physical therapy provider in the community.

In the Hospital:

You will be admitted to the hospital on the morning of your surgery. The average length of stay for total joint patients is 2 to 3 days. As early as the same day as your surgery, you may start physical therapy in the hospital. These sessions will include individual training and group therapy with other total joint patients. The hospital's discharge coordinator and nursing staff will work with you and your surgeon the most appropriate plans for your discharge needs.

Discharge from Hospital:

Occasionally, a patient will require transfer to a rehabilitation facility from the hospital for a short period of time before going home. After your discharge to home or a rehabilitation facility, we encourage our patients to start physical therapy as soon as possible. In some cases, a home health nurse and physical therapist will come to your home to work with you until you are able to leave the house for outpatient physical therapy and the necessary blood tests. We believe that the greatest benefits from physical therapy occur in an outpatient center setting and strongly encourage outpatient appointments as soon after surgery as possible. Social Services personnel at your hospital are trained to assist you with arranging care following your hospital stay.

Follow-up:

Prior to discharge from the hospital, your surgeon will discuss with you when he would like for you to schedule your first follow-up office visit.

We wish you well with your total joint surgery and recovery. Our extensive experience with patients requiring total joint surgery tells us that following these recommendations and careful preparation leads to less complication and quicker recovery from surgery. Please feel free to contact your surgeon directly if you have any questions regarding any aspect of your care.

Sincerely,

The Surgeons of OrthoVirginia

Total Joint Replacement Capabilities

OrthoVirginia's total joint replacement program helps patients alleviate pain and regain mobility every day. As one of the many specialized services we offer, our program features a comprehensive approach to patient care from an interdisciplinary team of highly skilled orthopaedic surgeons, physical therapists and other health care professionals, as well as on-site dedicated physical therapy clinics.

Experience and Leadership

Every year over 1800 joint replacement surgeries are performed by OrthoVirginia surgeons. From the non-operative management of arthritis to the most advanced minimally invasive surgery available, they stay abreast of the latest research on conservative care options, implant devices, and surgical techniques to provide state-of-the-art, customized treatment for patients of all ages.

Innovative Technology

Our program offers hip, knee, shoulder and other joint replacements with one goal in mind: to improve each patient's quality of life. As aging baby boomers create an ever-growing demand for joint replacement services, groundbreaking advances in the biomedical engineering industry are rapidly changing the way joint replacement is performed, opening up a host of options.

Most significantly, surgery is now a viable and successful choice for younger, active adults thanks to longer-lasting implants. Cutting-edge materials such as titanium, ceramics and plastics, as well as improved metal-on-metal technology, have strengthened weight-bearing surfaces, minimizing wear and tear, and increasing implant longevity. This is especially beneficial for patients in their 40s or 50s who lead active lives, have physically challenging jobs, or want to continue to play sports.

Advanced Surgical Techniques

Ongoing improvements in minimally invasive surgery are also transforming the landscape and OrthoVirginia's surgeons remain at the forefront. Our comprehensive minimally invasive total joint replacement program encompasses all aspects of the surgical process, from pre-operative education and advances in pain management techniques to implant modifications and post-operative care.

Today, most hip, knee and shoulder replacement surgeries are minimally invasive, with numerous benefits to the patient. These include:

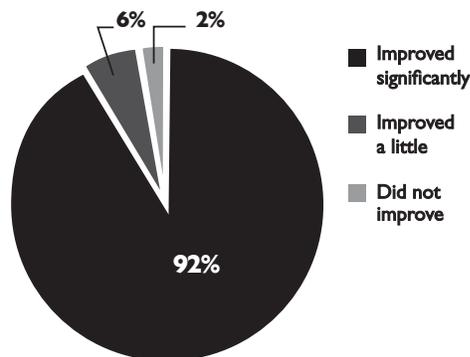
- *smaller incisions*
- *less tissue trauma, bleeding and post-operative pain*
- *shorter hospital stays*
- *faster recovery*
- *earlier return to work and activities*

Satisfied Patients

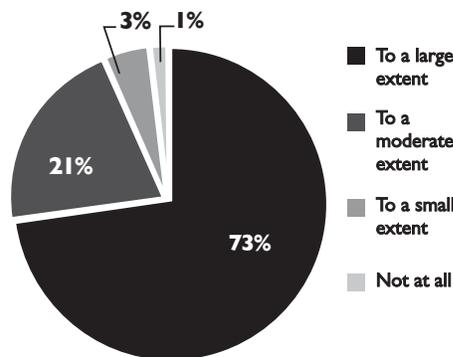
Most importantly, our patients are satisfied. An overwhelming majority—98 percent—say that total joint replacement surgery at OrthoVirginia alleviated their pain, while nearly 95 percent experienced “good to excellent” improvement in function and activity level.

Total Joint Replacement

As one of Northern Virginia’s leading providers of total joint replacement services, OrthoVirginia’s surgeons perform hip, knee, shoulder, elbow, wrist and ankle joint replacements. The number of these procedures has steadily increased over the past several years. Results of a survey of more than 2,600 patients who had joint replacements show consistently high levels of satisfaction.

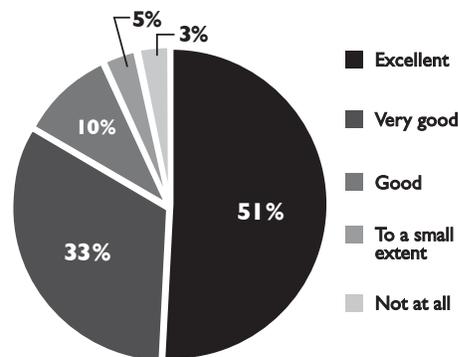


Decreased Pain Ninety-eight percent (98%) of OrthoVirginia’s patients experienced pain relief following joint replacement surgery.



Resumed Daily Activities

Ninety-four percent (94%) of OrthoVirginia’s patients said they resumed their daily activities *moderately or to a large extent*.



Improved Function and Activity Level

Ninety-four percent (94%) of OrthoVirginia’s patients rated their improvement in activity level and function as *excellent, very good or good*.

Total Joint Replacement Medical Clearance Request

Dear Doctor _____

Patient _____,

DOB _____, is scheduled for Hip/Knee/Shoulder replacement surgery on _____ at _____ Hospital.

Please assist us by providing pre-operative medical clearance for the planned surgery. Should your evaluation require further work-up or produce findings that may delay this elective surgery, please contact us as soon as possible.

In the list below we have identified those tests which we consider important from a surgical standpoint. Please order additional studies as you feel appropriate for medical evaluation and clearance. **If additional testing is needed, it should be scheduled and completed at least two weeks before the surgery in order to minimize preventable cancellations.**

_____ CBC	_____ (other)
_____ CHEM 7	_____ (other)
_____ PTT/PT/INR	_____ CXR
_____ EKG	_____ U/A with C&S (please do C&S even if U/A normal)

Please provide a thorough note pertaining to the patient's medical history along with the tests results. Please fax test results/notes to the hospital pre-op screening dept. at fax # _____ and to our office at fax # _____.

Thank you in advance for your assistance in the care of our mutual patient.

PHYSICIAN NAME _____

PHYSICIAN SIGNATURE _____

PHONE# _____

Pre-Operative Total Joint Checklist

Date of surgery: _____ Time of surgery: _____

Orthopaedic surgeon: _____

Hospital: _____

4 WEEKS BEFORE SURGERY:

- Call outpatient physical therapy to set up a pre-op appointment Date: _____
- Attend total joint class, if available Date: _____
- Visit your medical doctor Date: _____
- Dental examination Date: _____
- Procrit injections, if requested by the doctor: Date: _____
- Call outpatient physical therapy to set up a post-op appointment Date: _____

10 DAYS BEFORE THE SURGERY:

- Pre-Op appointment with OrthoVirginia Date: _____
- Pre-Op appointment with the hospital Date: _____

1 WEEK BEFORE SURGERY:

STOP TAKING PLAVIX, ASPIRIN, MOTRIN, IBUFROFEN, ALEVE AND ANY OTHER PRESCRIPTION ANTI-INFLAMMATORIES **EXCEPT** CELEBREX.

2 DAYS BEFORE SURGERY:

CHECK WITH YOUR HOSPITAL FOR ARRIVAL TIME BEFORE SURGERY
Day of Surgery Arrival time: _____

NIGHT BEFORE SURGERY:

DO NOT EAT OR DRINK ANYTHING PAST MIDNIGHT UNLESS INSTRUCTED BY THE ANESTHESIOLOGIST OR YOUR SURGEON

1st Post-Op Appointment in the Surgeons' Office: Date: _____

1st Outpatient Physical Therapy Appointment: Date: _____

**BRING THIS TOTAL KNEE REPLACEMENT
EDUCATION MANUAL WITH YOU TO SURGERY**

Total Knee Replacement: POTENTIAL RISKS AND COMPLICATIONS

BLOOD CLOTS (THROMBOPHLEBITIS): Knee surgery coupled with advanced age and/or previous blood clotting abnormalities exposes the patient to the risk of blood clots forming in their legs and occasionally breaking loose and traveling to the lungs. A blood clot that lodges in the veins of the leg is called deep vein thrombosis (DVT). A blood clot that travels to the lungs is known as a pulmonary embolus (PE) and can potentially be fatal. In patients treated with anticoagulants, the incidence of DVT after surgery is 2 to 4% and the incidence of PE is less than 0.5%, however many of those patients do not ever develop symptoms associated with clots. Precautionary measures that are implemented to reduce the risk may include blood thinners (Coumadin, Lovenox), application of compression stockings plus automatic foot pumps to promote blood flow in the legs, and early ambulation after surgery. The occurrence of a lung clot requires longer hospitalization and longer treatment with a blood thinner.

*** It is very important that you inform your surgeon if you have a history of blood clots.**

INFECTION: The risk of post-operative infection after total joint surgery is less than 2%. This can occur as early in the post-operative phase as 5 to 7 days or as late as years after surgery. Patients with rheumatoid arthritis, prior knee surgery or other systemic illnesses (diabetes, etc) have a slightly higher risk of infection. Antibiotics will be given to you immediately prior to surgery and will continue for approximately 24 to 48 hours after surgery to reduce this risk. Additionally, you will need antibiotics any time you undergo any invasive procedure such as dental work, colonoscopy, urologic procedures, or for any local (skin, ear, sinus, throat) infections for at least two years. The occurrence of an infection in your total knee can result in the temporary or permanent removal of the artificial joint components, prolonged IV antibiotics and/or the use of crutches or a walker for an indefinite period of time.

NERVE INJURY: The possibility of major nerve injury following total knee replacement is less than 1%. Nerve recovery is partial in most and the outcome is 'good' for about 50% of these patients. All patients routinely notice numbness in the skin surrounding the incision as the result of clipped nerve endings in the skin. The area of numbness usually decreases in size but will take time, even as long as a year after surgery.

Potential Risks & Complications, Cont'd.

VASCULAR INJURY: Injury to the blood vessels occurs in about 0.2% of all total knee replacement surgeries. The injured blood vessel is repaired during surgery as needed to avoid any serious threat to life or the extremity.

FRACTURE: The incidence of fracture in one or more of the bones around the knee is 2 to 3%. These fractures can be repaired during the surgery using surgical wire, screws, and/or plating systems for stabilization if necessary. Postoperative fractures can occur which may require surgical repair.

STIFFNESS: Some patients have difficulty achieving full extension (straightening) or full flexion (bending) of the knee following joint replacement surgery. Due to the design of the prosthesis, full motion is not always expected. Significant deficits of motion may require additional physical therapy, manipulation of the joint under anesthesia, or additional surgery. The biggest predictor of postoperative knee motion is preoperative knee motion.

INSTABILITY: The occurrence is rare, but a knee replacement surgery may result in a 'loose' sensation in the knee. This can usually be treated successfully with bracing and strengthening exercises over time but occasionally surgical intervention is necessary.

LOOSENING: The knee prosthesis may become loose over many years as cement loosens from the bone. This is usually called "aseptic" (noninfectious) loosening and can be caused by many factors. Of those patients, 10 to 15% may require surgical intervention to repair or replace parts or all of the implant. This is called 'revision surgery.'

POLYETHYLENE WEAR: A portion of your total knee replacement is made of a highly refined and durable plastic called polyethylene. Over time, this plastic can wear and possibly shed small particles that cause loosening of the prosthesis. This biologic process is called 'osteolysis' and may require polyethylene replacement or revision surgery.

PATELLAR INSTABILITY: One of the most common issues requiring revision total knee surgery is patellar instability or patellar pain. Great attention is paid to this articulation at the time of surgery but occasionally patellar component revision surgery is necessary if non-operative treatment fails.

Pain Management

The Pain Cycle

Your OrthoVirginia physician is keenly aware of your concern about pain and is committed to answering your questions and managing surgical pain with the latest techniques.

It is important to understand that pain has a cycle. It begins and increases until medication interrupts it. The aim of good pain control is to stop the pain before it becomes intolerable. The key is to stay ahead of the pain; this is one time that you do not want to tough it out. If the pain cycle takes hold, it will be harder to control. There are a variety of pain management techniques that can be used both during and after surgery to keep you as comfortable as possible. Anti-anxiety medications may be given in the pre-operative phase which will help you to relax and will improve the effectiveness of the pain meds.

During Surgery

Anesthesia is the loss of sensitivity to pain brought about by various drugs known as **anesthetics**. There are several types available to use during total joint replacement surgery. The anesthesiologist will work with your surgeon to establish the one that is best suited for you.

(General anesthesia) has been the most common form of anesthesia for many years. The patient is put into a deep sleep and will not feel sensation.

(Spinal or epidural anesthesia) targets a specific area, and totally numbs it. Although you may be awake, you will not feel pain. Typically, with spinal or epidural anesthesia, other medications are administered to make you very relaxed allowing you to enter into a light sleep state. As with general anesthesia, you will not remember the surgery.

Post-Operative Pain Control

There are several different types of pain control methods available that will keep you comfortable and allow you to be up and walking shortly after surgery. Your doctor will choose the method right for you based upon your medical history, the amount of pain you are having, and your phase of recovery.

Oral medications are often used and are proving to be quite effective in targeting the pain receptors and controlling surgical pain. A balanced mix of pain killers, anti-inflammatory drugs, and anti-nausea medications are administered orally prior to surgery

Pain Management, Cont'd.

to get a jump start on pain control and may be continued throughout your hospital stay. Oral medications are frequently substituted for other pain control methods in the recovery phase.

A **nerve block** is another effective method of pain control. Basically, a local anesthetic is injected into or near the nerve of the extremity. Nerve blocks can be administered prior to surgery or at completion of surgery. Nerve blocks prevent the pain signals from reaching the brain. Consequently, you feel no pain. These blocks can last for as long as 24 hours depending on the location and type of block used.

Pain medications can also be given intravenously (IV) through a vein in the arm. The **IV method** can be used with a **PCA** (patient controlled analgesia) pump. The pump can be regulated to provide a continuous supply of pain medication through the IV. If you begin to feel uncomfortable, you simply press the button on the pump and it will deliver a booster dose of pain medication. The pump is programmed with safety features to ensure that the correct dosing is delivered with no threat of overdosing.

There are also pain pump devices that can deliver pain medications directly into the joint. The pain pump delivers a continuous flow of pain medication and can be very effective in pain control without causing drowsiness that is a common side effect associated with PCA pumps.

Regardless of the type of pain management being used, it is important for you to communicate with your health care team if the pain medication is not sufficient, if you are feeling nauseous, or if you are not as alert as you feel you should be. Adjustments can be made to make you more comfortable.

TJC BEDSIDE EXERCISES

Perform 10 repetitions of each exercise per hour while awake



Ankle Pump:

Move Ankle Up and Down



Thigh Squeeze:

Tighten thigh muscles by pushing knee down into a straight position.



Straight Leg Raises:

Bend one knee. Keep your other leg straight. Tighten your thigh muscle and lift your leg. Slowly lower your leg.



Gluteal Squeeze :

Squeeze buttocks muscles.

Frequently Asked Questions About Total Knee Surgery

People facing joint replacement surgery typically ask the same questions. However, if you have questions that are not covered in this section, please ask your surgeon or the joint care team.

We are here to help.

**** What is arthritis and how does it affect my knee?***

Arthritis is a disease of the articular cartilage, the smooth cushion that pads and protects joints. In a healthy knee, this cushion or cartilage located between the end of the thigh bone (femur) and the shin bone (tibia) prevents the two bones from rubbing against each other. Over time, or following injury, the cartilage begins to wear away leading to bone-on-bone contact. The nerve endings surrounding the bones become irritated resulting in the pain, swelling and stiffness associated with arthritis.

**** What is a total knee replacement?***

The term total knee replacement is misleading since the knee itself is not replaced. The ends of the femur and tibia are shaped and capped with an implant device referred to as a prosthesis. The process is similar to having a crown put on your tooth. A plastic spacer is attached to the prosthesis, creating a smooth cushioning effect much like the original cartilage. By replacing the diseased and painful surface, the bone-on-bone articular pain is eliminated and allows you to return to an active, healthy lifestyle.

**** Is it possible to have both knees done at the same time?***

It is possible to have both knees done at the same time. This is called a bilateral total joint replacement. Unilateral joint replacement (one knee at a time) is done more often. The decision to replace one or both knees depends on several factors and the risks and benefits of this procedure should be discussed with your surgeon.

**** What is the difference between a cemented or uncemented prosthesis?***

When using the cemented technique, a prosthesis with a smooth finish is cemented or glued into place. In the uncemented technique, a prosthesis with a porous coating is placed directly into the bone. It is held in place by bone ingrowth into a rough or textured surface over time.

* ***Which is better—cemented or uncemented prosthesis?***

Each person's condition is unique, which is why your surgeon and you must weigh advantages and disadvantages specific to your needs.

Cemented replacements are generally used for less active people and people with weaker bones or osteoporosis. Uncemented replacements are generally used for younger, more active people. Studies show that cemented and uncemented prostheses have comparable rates of success.

* ***What is the success rate for total knee replacements?***

Approximately 90-95% of patients report good to excellent results in terms of pain relief. Most are able to significantly increase activity and mobility and return to the low impact activities they participated in prior to the onset of arthritis pain.

* ***Am I too old for this surgery?***

Your overall health is more of a determining factor than your age. Prior to the surgery, you will be asked to see your family doctor to assess any health risks. All measures will be taken to prepare you for a successful surgical outcome.

* ***How long will my new knee last?***

There are no guarantees regarding how long your new knee will last. Various factors such as weight, activity and bone quality can affect the usable life of your new knee prosthesis. Current studies indicate that the average knee prosthesis lasts for 15 to 20 years. With new materials and procedures, these expectations may continue to improve.

* ***Will I need to have my knee replaced again in the future?***

Some people have a knee replacement that lasts their entire lives; other people need to have the procedure repeated. The total joint implant's longevity will vary in every patient. If the bone does not bond properly to the first replacement, the prosthesis becomes unstable and needs to be replaced. If the plastic spacer that cushions the joint becomes extremely worn, this may also require replacing.

*** *What are the major risks of this surgery?***

All surgeries carry a certain amount of risk. Infection and blood clots are two major complications. However, because of our proactive approach in treating possible complications the likelihood of these complications is significantly diminished.

We take special care to safeguard you from infection following surgery. You will be given antibiotics both before and after the surgery. To further minimize the risk of infection, we have streamlined the surgical procedure to take less time. The less time your wound is open, the less chance of infection.

Following surgery, blood clots can be a problem. You will usually be given medication to reduce the risk of blood clots forming. Examples of such blood thinners or anticoagulants are Aspirin, Coumadin, and Lovenox. Getting out of bed and walking soon after surgery is another way to reduce the risk of blood clots.

*** *How much time will the surgery take?***

The surgery itself takes one or two hours. There is much preparation in the operating room with anesthesia, positioning, and equipment. Afterward in the recovery area you will be monitored closely in a special unit called the Post Anesthesia Care Unit (PACU) until the anesthesia wears off. Once you are awake and stable, you will return to your room on the orthopaedic floor and your family will be able to visit with you.

*** *Who will be doing the surgery?***

Your orthopaedic surgeon will be performing the surgery. Physician assistants, registered nurses, or orthopaedic residents often assist during the surgery.

*** *Will I be awake during the surgery?***

During surgery, an anesthesiologist will administer an anesthetic that will provide total pain relief. There are different types of anesthetics: a general anesthetic will put you into a deep sleep, while a regional anesthetic will numb specific areas only. Normally, regional anesthetics are given with another medication that will make you very relaxed and put you into a light, dreamlike state. (Refer to the Pain Management section in the manual.)

*** *Will I be in a lot of pain after surgery?***

You will have discomfort following the surgery. However, we have considerable experience in caring for patients after surgery and know how to keep our patients comfortable. (Refer to the Pain Management section in the manual.)

*** *What will my scar look like?***

There are several different techniques used for knee replacement. The type of technique will determine the number, location, and length of the scar(s). Your surgeon will discuss which technique is right for you.

There may be some numbness around the scar after it is healed. This is perfectly normal and should not cause any concern. The numbness usually disappears over time.

*** *Will my joint be any different?***

Some people may notice a minor clicking sound when they bend their joints. This is the result of the prosthesis, or artificial parts, coming in contact with each other. It is normal and is no cause for concern. Kneeling may be a bit uncomfortable during the first year. This normally becomes less noticeable over time, but not everyone can kneel on the total knee without discomfort.

*** *Will I need a blood transfusion after surgery?***

You may need blood after surgery although this is becoming less frequent. If your surgeon requests it, prior to surgery you may donate your own blood (autologous), have relatives donate blood for you (donor directed), or use the community blood supply (blood bank). Many surgeons also use a re-infusion drain system after surgery. This system allows your own blood that is collected into the drain to be returned back to you through your IV within a certain period of time after surgery.

*** *How long will I be confined to bed after surgery?***

On the day of surgery, you will stay in bed most of the day. Depending on the time of day that you get to your room after surgery, you might get out of bed with help to briefly stand, essentially beginning your recovery the same day! Your care team will advise you when it is safe to get up. Early the next morning, you will be up and dressed to start the day's activity. Usually, most patients are walking with a walker or crutches by the afternoon.

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

Joint replacement patients usually stay in the hospital an average of 2 to 3 days, assuming they achieve the goals necessary to meet discharge criteria.

*** *Will I need a walker, crutches, or cane?***

Patients use an assistive device such as walker, crutches, or cane until balance and strength are near normal. People progress at their own pace and will normally use the assistive device for at least 2 weeks. Your surgeon will tell you when it is time to retire them. The discharge coordinator will arrange for you to get the assistive devices. The physical therapist will teach you how and when to use them.

*** Will I need any other equipment at home?**

After total joint surgery, you may benefit from a high toilet seat. You may also benefit from a bath seat or grab bars in the bathroom. Physical therapy, occupational therapy, and the discharge coordinator will discuss the options with you. Your surgeon may use a machine called a CPM machine (continuous passive motion) when you are in the hospital. If your surgeon does, you will likely have one delivered to your home.

*** Can I go directly home or do I have to go to a rehab center?**

Occasionally, some patients require a short stay in a subacute/rehab facility especially if you live alone. However, most of our patients (approximately 80%) go directly home. We believe that the recovery in the familiar environment of home is most effective with visiting nurses and physical therapists. The discharge coordinator will talk with you and make these arrangements.

*** Will I need help at home?**

Although you will be well on your way to recovery when you leave the hospital or the subacute/rehab facility, you will need someone to assist you with meal preparation, dressing, etc., at least for the first week or two. If you go directly home from the hospital, your surgeon and the Discharge Coordinator will arrange for a home healthcare agency to visit your home.

Prior to coming to the hospital for surgery, plan ahead to make the coming home easier. Take care of such things as getting prescriptions filled, changing the bed linens, doing the laundry, washing the floors, arranging for someone to cut the grass and walk the dog, stocking up on groceries, etc. Your job after surgery is to focus on your recovery.

*** Will I need physical therapy when I go home?**

Physical therapy immediately after surgery is a key factor recovery. Patients are encouraged to utilize outpatient physical therapy as soon as possible and we recommend that you call to set up your post-op PT appointments BEFORE your surgery. The number of physical therapy sessions is based on your individual progress. OrthoVirginia has several outpatient physical therapy facilities, or you can also go to one of your choice. Physical therapy can also be arranged in your home through the Home Healthcare agency if needed.

*** Why should I exercise before surgery?**

The better the condition your muscles are in prior to the surgery, the easier and faster your recuperation is expected to be. It is important to learn the exercises and be comfortable with them prior to the surgery so that you can continue them once you return home. Starting the exercise before surgery will build muscle tone and pave the way to quick recovery.

*** *After leaving the hospital, when do I see my surgeon again?***

Your surgeon will tell you when to make your follow-up appointment in the office; it is usually 10 days to 3 weeks after surgery. You will be given specific instructions at the time of discharge from the hospital.

*** *When can I drive?***

Your return to driving largely depends on which knee was effected and how committed you are to your exercises and physical therapy. If you had surgery on your left knee, you may be able to drive a car with an automatic transmission sooner than if the surgery was on your right knee with a manual transmission. Regardless of your progress, you should not consider driving if you are still taking prescription pain medication. Your surgeon will let you know when it is advisable to drive again.

*** *When can I return to work?***

Typically, people plan on taking a one month leave of absence from work. The physical demands required for your job, as well as your own progress, will determine when you can return to work. Your surgeon will tell you when you can return to work and if there are limitations.

*** *When can I resume having sexual activity?***

After surgery, it will take time to regain your strength, as well as confidence in your new knee. Most people feel able, physically and mentally, to engage in sexual activity about four to six weeks after surgery. Depending on the individuals healing rate, at four to six weeks the incision, muscles, and ligaments are usually sufficiently healed to consider resuming sexual activity. Talk to your surgeon if you have any questions.

*** *Will my medications affect my ability to engage in sexual activity?***

Some medications can affect performance and/or enjoyment during sexual activity. Many narcotic pain relievers and cortisone medications can decrease sexual performance. Other common medication-related side effects are a decreased interest in sex, vaginal dryness, abnormal erections and delayed orgasms.

If you sense that your medication is causing these side effects, try having sex in the morning before taking your first dose or in the evening before your last dose.

Do not adjust or stop taking your prescribed medicine without consulting your surgeon. Often, a simple adjustment or change of medication can eliminate unwanted side effects.

*** Are there any positions that should be avoided during sexual activity?**

It is best to use a side-lying position in the early recovery stages to avoid kneeling on your new knee joint. Pillows can also be used to pad the knees and provide support.

As your recovery progresses, lying on your back using a pillow under the knee to create a comfortable bend is often an alternative position.

Later in the recovery process as the swelling decreases and range of motion improves, the knee joint replacement patient can assume a top position. Do not use this position until your knee is comfortable and the incision is totally healed.

Remember, you are still healing. Just like other activities, it may take some time to regain your former stamina but the changes are temporary and needed to protect your new knee.

*** Are there any activities that I should avoid initially?**

It is important to keep your new joint moving. However, you should return to your normal activities gradually. Start out slow, and work your way up. For example, taking a five mile hike on your first time out is not realistic. Rather, walk until you begin to get tired, adding distance to each subsequent walk until you have reached your goal.

You will be instructed by your joint care team to avoid specific positions of the joint that could put stress on your new joint. You should avoid high impact activities such as long distance running, singles tennis, basketball, downhill skiing, football, and the like. Consult your surgeon prior to participating in any high impact or injury-prone sports.

*** Are any activities better than others?**

Exercise is important to the entire body to maintain health and it is especially beneficial for your new joint. Your surgeon will advise you when it is safe for you to incorporate low impact activities such as dancing, golf, hiking, swimming, bowling, gardening, and the like back into your normal routine.

Glossary of Terms for Total Knee Replacement

ANTICOAGULANTS - Anticoagulant medications are blood thinners that may be prescribed to minimize or treat blood clots

COUMADIN - oral anticoagulant, slow-acting

LOVENOX - is injectable anticoagulant, faster acting

ARTHRITIS - the wearing away of the ‘cushion’ known as ‘cartilage’ in a joint. There are two major types of arthritis, osteoarthritis and inflammatory arthritis.

ARTHROPLASTY - (“formation of joint”) is an operative procedure in which an arthritic dysfunctional joint surface is replaced or modified

AVASCULAR NECROSIS - a reduction in the normal blood flow to the bone over time can cause ‘bone death’ or necrosis which usually leads to pain, deformity, and stiffness in a joint (Avascular necrosis or Osteonecrosis).

BONE CEMENT - medical cement product that may or may not be used to secure the placement of your prosthesis. The decision to use cement is dependent on type of prosthesis, bone quality, and surgeon preference.

CARTILAGE - smooth, soft tissue covering the ends of bones and serving as a cushion between joint surfaces

COMPRESSION STOCKINGS - stockings used by joint patients to help compress the veins in your leg, improve venous flow, and reduce leg swelling and help minimize the potential for blood clots following surgery

COMPUTER ASSISTED TKA - bony landmarks of the knee can be identified during surgery using computer precision. This can allow great accuracy in placement of the prosthesis as well as less violation of the structure of the leg bones. When combined with the minimally invasive techniques there is the hope that recovery from knee replacement will be quicker and that the replacement will be longer lasting.

EPIDURAL ANALGESIA - placement of a small tube-like catheter into the spinal column. Medication is given continuously through the catheter during the procedure to create and maintain anesthesia for as long as the catheter is in place

FEMUR - large long bone of the upper leg (thigh bone)

GENERAL ANESTHESIA - deep sleep is induced and maintained during the procedure using IV medications and inhalation of anesthetic agents

Glossary of Terms for Total Knee Replacement

- INFLAMMATORY ARTHRITIS** - chronic system disease such as Rheumatoid Arthritis or Gout that can cause swelling and inflammation in the joint lining (synovium). Over time the cushion wears away causing pain and joint stiffness. This condition usually affects multiple joints, not just weight bearing joints.
- KNEES CARTILAGE** - covers end of the femur, the tibia, and the back of the patella
- LIGAMENTS** - firm bands of tissue that connect the bones of joints and stabilize the joint while allowing motion
- MINIMALLY INVASIVE SURGICAL TKA** - modern techniques and instruments are used to make a smaller incision, damage less muscle, and cause less bleeding which can lead to less pain and quicker recovery. The goal is to return to a normal life quicker without compromising the long term result of the new knee replacement.
- MUSCLES** - provide the power for movement of a joint through their attachment to bone
- OSTEOARTHRITIS (DEGENERATIVE ARTHRITIS)** - the normal use over years can cause the cartilage surfaces to crack and wear away leaving bony surfaces to rub together and produce pain. This is the most common form of arthritis and the most common indicator for knee joint replacement.
- PATELLA** - the knee cap serves as the protector of the joint space in the knee and is mechanically important for proper extension or straightening of the knee
- PATIENT-CONTROLLED ANESTHESIA (PCA)** - IV administration of pain meds after surgery where the frequency and amount of pain medication is controlled by the patient Therapeutic and safe doses of pain medications are regulated by the PCA machine and pre-set by the physician.
- PROSTHESIS** - artificial 'implants' that cover and replace damaged joint surfaces. These are made of metal or plastic (polyethelene).
- SPINAL ANESTHESIA** - a regional anesthetic administered into the lumbar spinal area producing an absence of pain, sensation, and motion in the lower limbs for a limited amount of time.
- TENDONS** - bands of tissue that attach muscle to bone
- TIBIA** - the larger of the 2 bones in the lower leg (shin bone)
(the smaller bone is the fibula)
- TOTAL KNEE ARTHROPLASTY (TKA)** - the damaged surfaces of the femur, tibia, and patella are cleaned and prepared by the surgeon. An artificial 'prosthesis' is matched closely with the patient's own natural knee size. The prosthetic knee is placed over the surgically prepared surfaces of the femur, tibia, and patella of the knee and a polyethelene tray or insert is placed between the femur and tibia components.



Total Knee Replacement

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

STEP 1

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

STEP 2

The metal component is attached to the end of the femur with bone cement.

STEP 3

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

STEP 4

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

STEP 5

A plastic plate is attached to the tibial component. The plate will support the body's weight and allow the femur to smoothly glide over the tibia.

STEP 6

To make sure the patella (knee cap) glides smoothly over the new artificial knee, a plastic component is cemented onto its rear surface.

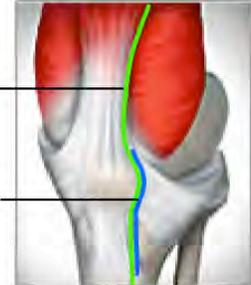
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Mini-Incision Total Knee Replacement

Traditional incision is 6-12 inches (16-30 cm)

Mini incision is 3-5 inches (7.5-12 cm)



Mini-incision Total Knee Arthroscopy, also called MIS TKA, replaces the damaged and painful areas of the knee joint with new metal and polyethylene plastic parts. The MIS total knee procedure is performed through a smaller incision than traditional total knee replacement surgery.

STEP 1

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

STEP 2

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

STEP 3

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

STEP 4

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

STEP 5

A plastic plate is attached to the tibial component. The plate will support the body's weight and allow the femur to move smoothly over the tibia.

STEP 6

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

Additional Resources

Looking for more information about total joint replacement?

The following Web sites are excellent resources:

OrthoVirginia	OrthoVirginia.com
American Academy of Orthopaedic Surgeons (AAOS)	www.aaos.org
American Association of Hip and Knee Surgeons (AAHKS)	www.aahks.org
The Knee Society	www.kneesociety.org
The Hip Society	www.hipsoc.org
Arthritis Foundation	www.arthritis.org

HOSPITALS

Reston Hospital Center	www.restonhospital.com
Inova Alexandria Hospital	www.inova.org/IAH
Inova Fairfax Hospital	www.inova.org/IFH
Inova Fair Oaks Hospital	www.inova.org/IFOH
Virginia Hospital Center	www.virginiahospitalcenter.com

JOINT REPLACEMENT MANUFACTURERS

Depuy	www.depuy.com
Zimmer	www.zimmer.com
Biomet	www.biomet.com