NORTH TEXAS ORTHOPEDICS

THE STRENGTH OF EXPERIENCE

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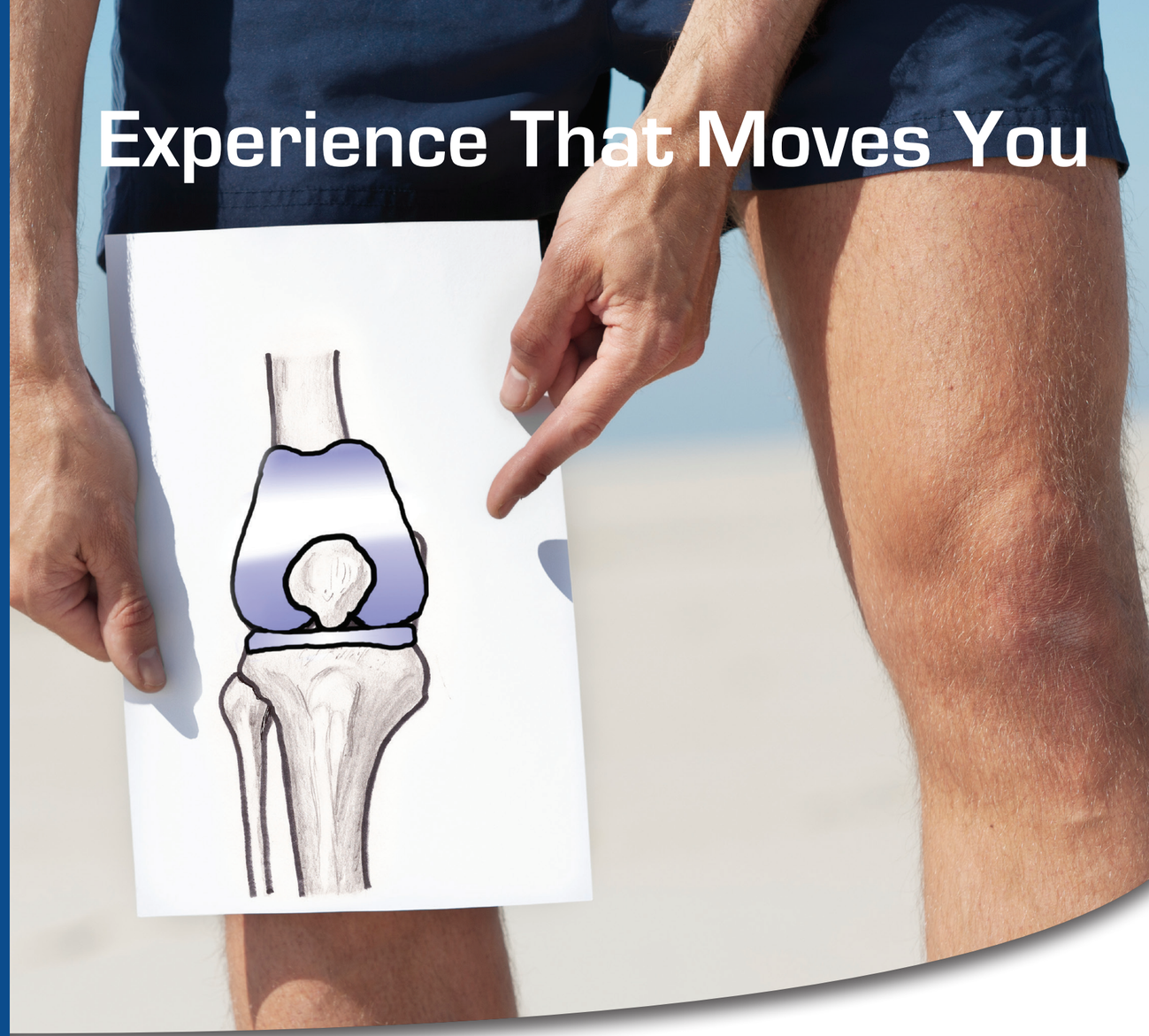

A Guide for Your Joint Replacement

Answers to Common Questions and Insights for the Planned Procedure and Recovery Process

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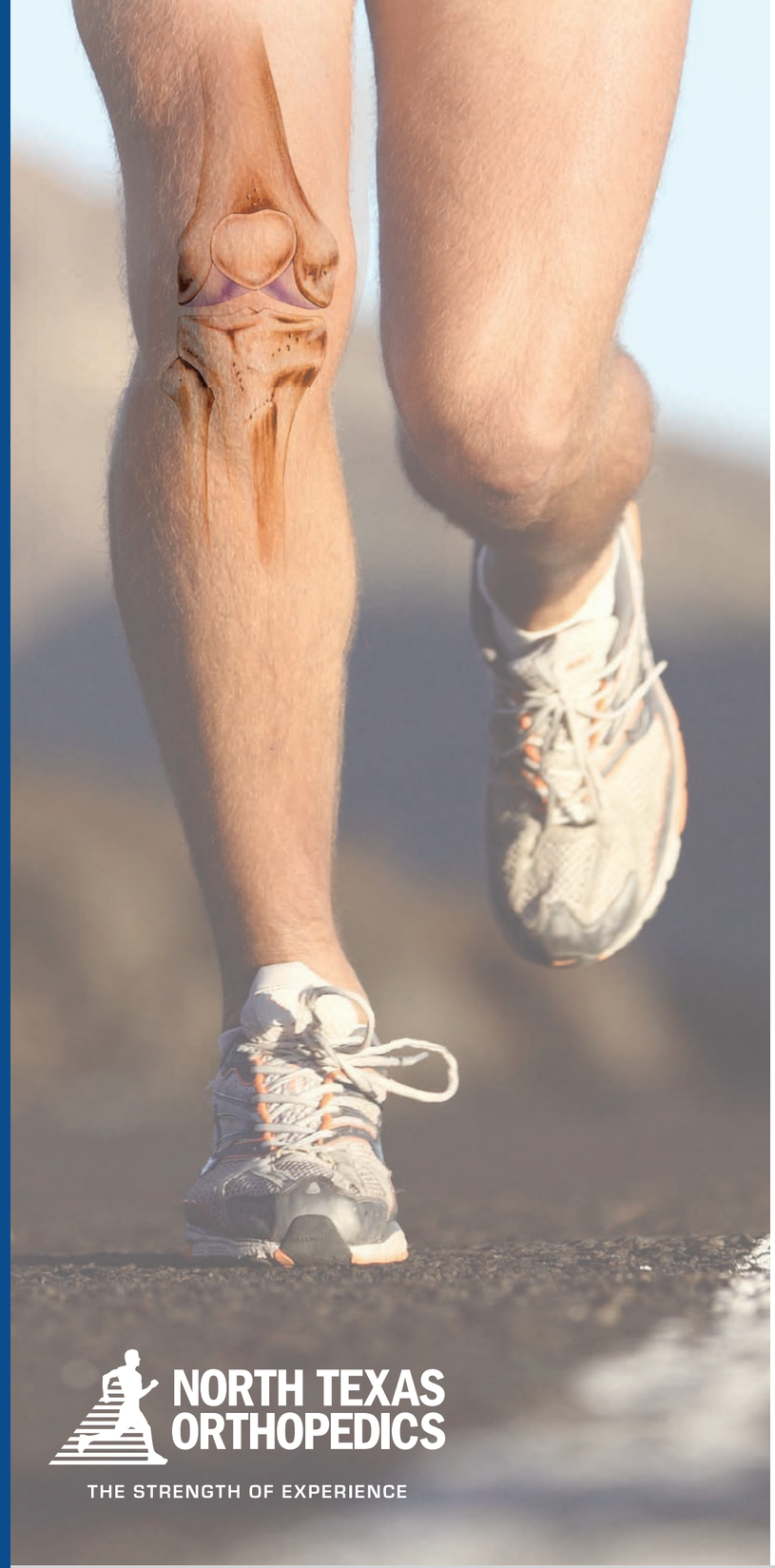

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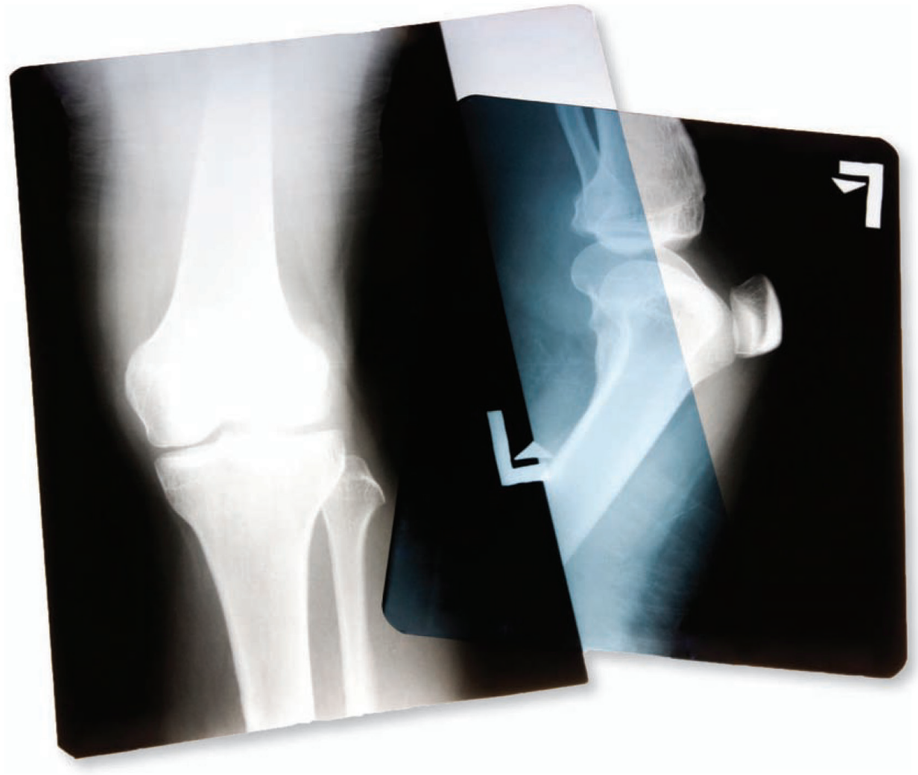

- Answering questions
- Providing insights
- Reviewing plan
- Overview of total joint experience

A Guide for Your Joint Replacement

This booklet is intended to serve as a guide for your planned joint replacement. Even though it is not required reading, most patients will find it helpful. Its primary focus is to answer common questions and provide insight for your anticipated procedure. Along the way, Dr. Williams and the staff at North Texas Orthopedics will be actively engaged in planning and education. Should you have any remaining questions, you are encouraged to contact Dr. Williams.

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REPLACEMENT SPECIALIST

YOUR SURGEON

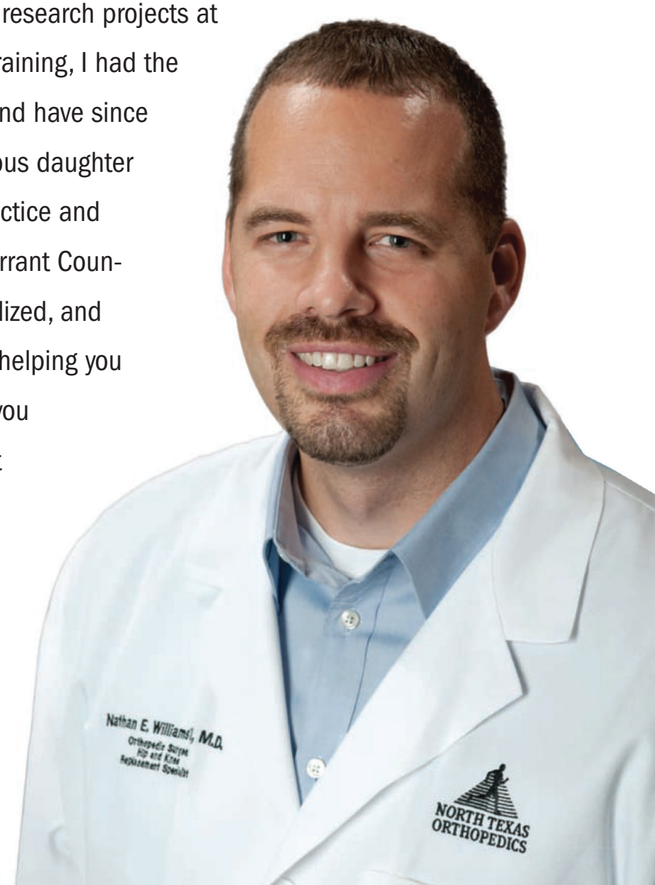
Meet Dr. Williams

Growing up in Asheville, North Carolina, allowed me to enjoy biking, kayaking, golfing, trekking, and fishing in the beautiful Appalachian Mountains. I am the oldest child in a large Christian family and was fortunate to have a mentor surgeon for a father and a mother who exhibited the qualities of care and compassion. After earning a bachelor's degree in Chattanooga, Tennessee, at Southern Adventist University, I obtained my medical degree at Loma Linda University School of Medicine in southern California. While in medical school, I became fascinated with orthopedic surgery and chose it for a career. Following medical school, I began my orthopedic training at Wright State University in Dayton, Ohio. While in residency, I developed a passion for joint replacement and elected to pursue additional subspecialty training in hip and knee surgery at the Scripps Clinic in La Jolla, California. My fellowship training focused on advanced techniques in joint replacement, minimally invasive surgery, computer-aided surgery, and complex revision procedures. My fellowship training also offered me the opportunity to conduct research projects at the Shiley Center for Orthopedic Research. During training, I had the good fortune to meet and marry a beautiful Texan and have since made Texas my home. We are blessed with a vivacious daughter and three strapping sons. I have been in private practice and focusing on hip and knee replacement surgery in Tarrant County since 2009. I seek to provide customized, specialized, and personalized care for my patients. I look forward to helping you obtain your goals as well as return to the activities you enjoy. My goal is simply to provide you with the best joint replacement experience and outcome.

Sincerely,

Nathan E. Williams II

Nathan E. Williams, II, M.D.



THE OFFICE

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"Why me?" is a question commonly asked during an office visit. The answer for why arthritis has worn out your joint is due to multiple factors. Some patients have a history of injury, others have hereditary causes, and most share the commonality of increasing age.

Arthritis is a general term used to describe the wearing out of a joint. Though there are numerous types of arthritis, osteoarthritis is the most common form. Osteoarthritis is known as the "wear and tear arthritis" that can occur with years of use. Less common are autoimmune disorders, such as rheumatoid arthritis, psoriatic arthritis, and spondyloarthropathies. These conditions can result in joint damage caused by the body's own immune system.

Cartilage, the cushion within the joint that separates the bones, is the earliest damaged structure in arthritis. When arthritis reaches a severe stage, bone and ligaments can also be damaged. The damage caused to the joint is irreversible. Arthritis severity can be assessed during the office visit by a physical exam, X-ray, and MRI.

With time, joint damage progresses as does the pain. Nonsurgical treatments focus on decreasing joint pain and inflammation. These nonsurgical treatments include pain medications, injections (steroids and visco-supplements), nutritional supplements (glucosamine, chondroitin, fish oil, etc.), braces, walking aids, low-impact exercise, and weight loss. As arthritis advances, pain management strategies often become ineffective and surgery may be indicated. Patients often ask when surgery should be considered. The answer is when quality of life and level of pain become unacceptable. The decision for surgery is made in concert with your surgeon's recommendations.

Joint replacement is a major procedure, but it is safe and problems rarely occur. Potential complications with major surgery may include damage to blood vessels and nerves, fractures, bleeding, infection, blood clots, joint instability, pain, stiffness, heart attack, stroke, kidney and breathing problems, and death.

Inherent in specialized care is a focus throughout the surgery and recovery process to minimize risk. Understanding the patient's health history, informed decision making, surgical skill, judgment, and attention to detail are all part of the comprehensive approach at North Texas Orthopedics' Joint Center.

The answer for why arthritis has worn out your joint is due to multiple factors.

Causes of Osteoarthritis

- Age
- Gender
- Trauma
- Heredity/genetics
- Infection
- Congenital deformity
- Repetitive activity
- Occupational hazards

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SURGERY PLANNING

Once the decision for surgery has been made, the planning process begins.

BEFORE SURGERY

Several steps are taken prior to scheduling surgery. First, a presurgical exam is done by your primary care physician. The primary care visit is scheduled by the patient and is done when surgery is planned. Some patients may also need to see additional specialists prior to surgery scheduling. Your primary care physician, North Texas Orthopedics, and the hospital will work together to coordinate your surgical clearance. Surgical clearance typically takes two or more weeks to complete.

Insurance approval will also be obtained by the billing office at North Texas Orthopedics.

Cost and co-pay amounts can be obtained in advance of surgery. Please contact Dr. Williams' medical assistant or the billing office for more information. Physical therapy visits prior to surgery can be scheduled upon request. These evaluations are optional and provide one-on-one time with a therapist and focus on education and exercise demonstration. Next, it is time to choose a date for surgery. The date will be coordinated with Dr. Williams' medical assistant. Optimal timing of surgery is based on patient variables. These include work obligations, family commitments, travel plans, pain severity, and the anticipated length of recovery. Patients are counseled to anticipate an eight to twelve week recovery period prior to planned work return or travel. Some patients may return to work much earlier; however, it is best to consult Dr. Williams regarding your particular situation if an earlier return is necessary. Work releases and employer forms are completed upon request.

Following surgery scheduling, several hospital-based events will be arranged. You will be invited to a "Joint Camp" prior to surgery. Joint Camp is a group presentation that focuses on common questions about surgery and the hospital stay. The class provides an opportunity to visit the hospital and meet members of your joint care team. Family and friends are encouraged to attend Joint Camp as important team members. At Joint Camp, you will meet other patients planning surgery. Pre-admission testing is conducted at the hospital prior to surgery. This testing may include blood tests, heart tests, and X-rays. It is very important that you complete your pre-op visit one or two weeks prior to your surgery date. Items to bring to the hospital pre-op visit are listed to the right; please allow two hours to complete this visit. The Joint Camp and pre-op visits will be coordinated with you by North Texas Orthopedics and the hospital.

Notify Dr. Williams if:

- You become sick prior to surgery
- You develop a skin rash
- You have NOT been given instruction on stopping blood thinning or immune suppressing medications (if applicable) prior to surgery

Surgery Planning Timeline

- Presurgical primary care exam
- Insurance approval
- Physical therapy (optional/upon request)
- Date selection
- Joint Camp
- Presurgical hospital testing

Hospital Pre-Op Visit Check List

- Insurance card and driver's license
- Current list of medications (include dose and frequency)
- List of past surgeries and hospitalizations

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Some medications that inhibit the immune system can also inhibit wound healing and should be stopped prior to surgery.

Blood thinning medications should be stopped prior to surgery to minimize bleeding.

It is very important to review any blood thinning or platelet inhibition medications with Dr. Williams prior to surgery. These medications include: Aspirin, Coumadin, Plavix, Aggrenox, Ticlid, and others. These medications must be stopped prior to surgery. Please follow doctor recommendations prior to stopping Coumadin. Other medications are occasionally used as a substitute for Coumadin prior to surgery, and exact recommendations will be provided by your doctor. Failure to stop these medications may result in surgery cancellation. Some medications that inhibit the immune system can also inhibit wound healing and should be stopped prior to surgery. Listed below are general medication recommendations; they are not meant to take the place of direct advice from your treating doctor. Please confirm all medication changes with your doctor.

Medications Causing Bleeding at Surgery:

• Ticlid/Ticlopidine	Stop 21 days prior to surgery
• Ecotrin/Aspirin	Stop 10 days prior to surgery
• Aggrenox/ASA-Dipyridamole	Stop 10 days prior to surgery
• Plavix/Clopidogrel	Stop 7 days prior to surgery
• Coumadin/Warfarin	Stop 5 days prior to surgery
• Persantine/Dipyridamole	Stop 4 days prior to surgery
• Advil/Ibuprofen	Stop 1 day prior to surgery

Medications Inhibiting Healing After Surgery:

• Rituxan/Rituximab	Stop 10 weeks prior to surgery
• Arava/Leflunomide	Stop 8 weeks prior to surgery
• Humira/Adalimubab	Stop 8 weeks prior to surgery
• Remicade/Infliximab	Stop 6 weeks prior to surgery
• Enbrel/Etanercept	Stop 3 weeks prior to surgery
• Kineret/Anakinra	Stop 1 week prior to surgery

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IMPORTANT

Preoperative Hibiclens Bathing Instructions:

Important: You will need to shower with a special soap called chlorhexidine gluconate (CHG). A common brand name for this soap is Hibiclens. The soap may come in a liquid form or in a scrub brush applicator, and either form is acceptable to use. The Hibiclens will be provided by the hospital at your pre-op visit.

- Do not use if allergic to chlorexidine (use Dial soap instead, if allergic)
- Shower or bathe with Hibiclens the night before surgery and/or on the morning of surgery
- Do not shave the area of your body where the surgery will be performed
- With each shower or bath, wash your hair as usual with shampoo
- Use the Hibiclens from the neck down only. Do not use the Hibiclens near your eyes or ears to avoid injury
- Wash your body gently for 5 minutes. Do not scrub your skin too hard. Do not use regular soap after applying the Hibiclens
- Rinse your body and hair thoroughly after the Hebiclens and shampoo
- Pat yourself dry with a clean towel
- Do not use any lotions, oils, or creams on your skin after cleansing with the Hibiclens

DAY OF SURGERY

SURGERY DAY EVENTS

The day of surgery is the culmination of significant anticipation and preparation. Remember, no food or drink after midnight the day before surgery. Every patient approaches the day differently. Some are anxious, others are eager, and all look forward to having it over. The day of surgery is similar in ways to air travel. You will need to arrive at the hospital an hour prior to surgery. Bring a personal bag packed with essentials. Recommendations are hygiene items, loose comfortable clothes, reading material, and preferred electronic devices. Please do not wear makeup or nail polish the day of surgery. You will be asked to remove contact lenses, dentures, or bridges; therefore, it might be best to bring containers for these items with you to the hospital.

Upon arrival at the hospital you will meet your surgery team: the anesthesiologist, operating room nurse, and your surgeon. You will have the opportunity to ask remaining questions and receive instruction on the day. Family and friends are encouraged to accompany you and provide support on the day of surgery.

The operating room is brightly lit and chilly. A warm blanket will be provided, and your team will assure your comfort prior to going to sleep. Many surgeries are done under a general anesthetic. That means you will be completely asleep and have no recollection of the procedure. Some patients may have a regional anesthesia. This involves a numbing injection, done in either the leg or back prior to surgery, which temporarily blocks the nerves and causes numbness. The surgery is scheduled for two hours. Part of the surgical time is dedicated to positioning you comfortably, preparing the room, and allowing anesthesia set-up and recovery.

The surgery itself involves a minimally invasive incision. The length of the incision varies based on patient size, implant size, degree of joint contracture, and if there has been prior surgery on the joint.

The surface area of the joint damaged by arthritis is removed, and implants are size-matched to your anatomy. Hip and knee replacement utilizes four main parts to make up a total joint (see pictures below). Most hip replacements are press fit into the bone like a cork in a bottle without cement, and most knee replacements are cemented in place. A tourniquet is used for most knee replacements, and is not used in hip replacement. The incision site is typically closed in a plastic surgery fashion. Absorbable sutures are utilized to promote a more cosmetic appearance, and staples are rarely used. After the surgery is complete, Dr. Williams will meet with your family to provide updates of your progress.

From the operating room, you will then be transferred to the recovery area where you will remain for an hour or two. This is typically the first place a patient will remember following surgery completion. A nurse in the recovery area will monitor you as you awaken and keep you comfortable.

The next stop on your journey will be your room in the surgical ward. This is where you can first receive friends and family. There you will meet additional nurses and aids who will be taking care of you during the rest of your hospital stay. The remainder of the day is focused on rest and comfort. You will have an intravenous line, or IV, that is used for medication and fluids. You will also have a Foley catheter, which is placed while you are asleep in surgery. Sequential compression devices, or SCD's, will be on your legs and inflate to improve circulation. A tube will be under your nose providing additional oxygen, and a device will be attached to your finger monitoring blood oxygen level. Most patients use this time to rest. A family member can stay overnight with you in the hospital if desired.

Total Hip Arthroplasty

Total Knee Arthroplasty

Surgery Day Itinerary:

- Nothing to eat/drink after midnight
- Hibiclens scrub
- Arrive early at hospital
- Patient and family meet the surgical team
- Patient and family meet with Dr. Williams
- Operation (~2hrs)
- Recovery area (~1.5hrs)
- Transfer to ward and reconnect with family

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HOSPITAL STAY

STAYING IN THE HOSPITAL

The expected hospital stay following surgery is one to two days. The vast majority of patients are able to return home after several days in the hospital. The main goal after surgery is to regain your independence and return home. An inpatient rehab facility is available for patients who live alone and/or have difficulty mobilizing after surgery. Inpatient rehab provides around-the-clock nursing care as well as daily physical therapy. Most rehab stays range from five to ten days. A social worker will assist you in the hospital to coordinate after-hospital care. This can include a rehab facility, home physical therapy, home nursing, and home accessories such as walkers. Social workers are a valuable resource and will meet with you often and answer questions during your stay.

Each morning in the hospital involves a blood draw. This is done to monitor your electrolytes, organ function, and blood levels. Also, "vital signs" will be assessed multiple times per day by a member of your care team. Dr. Williams will visit every day to monitor your recovery and provide progress updates. An internal medicine physician may also be requested to assess you during your stay. Most patients do not need a blood transfusion following surgery. The need for a transfusion is based on multiple factors and will be discussed if a transfusion is needed. Multiple medications will be administered during your hospital stay. These include antibiotics, blood thinners, pain medications, and routine home medications. These medications will be reviewed with you by your care team.

The first day after surgery means the beginning of therapy. Physical therapy focuses on leg exercises, standing, balance, and walking. Therapy will occur twice a day while in the hospital. Instruction on self-exercises will be provided as well. Rest, ice, and elevation are also important parts of early recovery that will be reviewed with you. Most patients begin walking with a walker and later when at home, transition to a cane. Expectations after several days are to be able to stand, walk, and dress on your own.

Foley catheter will be discontinued and your surgical dressing will be removed. If the incision is dry a dressing is no longer required. At this point you may resume showering. You are allowed to shower without covering the incision if it is dry. Some patients may have oozing at the incision requiring a dressing in and out of the shower for several days. The second day is similar to the first. Therapy involves moving better and walking farther. Most patients will be going home on the second day if they meet the criteria.

The main goal after surgery is to regain your independence and return home.

Hospital Social Worker Services:

- Arrange for home physical therapy
- Arrange for home walkers and other needed aids
- Arrange for inpatient rehab, if needed

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GOING HOME

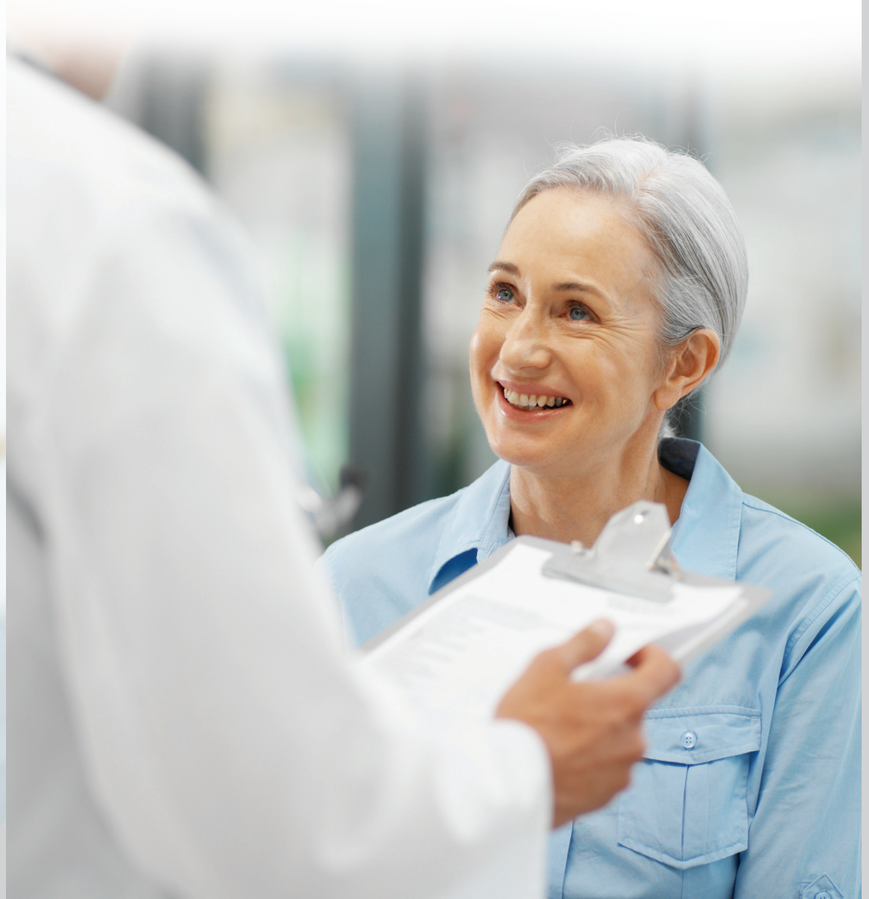
YOU'RE GOING HOME

Patients who find balance between rest and activity have the easiest recoveries.

This is an exciting accomplishment. A tremendous amount of determination and effort have gone into your return home. Though the surgery and initial recovery are finished, important tasks remain. Physical therapy and rest are essential parts of joint replacement. Therapy lasts for twelve weeks. The first three to six weeks are done in your home by a visiting therapist two or three times a week. The second six weeks involves an outpatient therapy center. Each individual's speed of recovery is different. Some bounce back incredibly quickly; others require more time. You will be counseled by Dr. Williams and your therapists as to your progress. It is important not to become discouraged. You are in many ways learning to walk again, and the process takes time.

Your body is recovering from a major procedure and will be doing so for the next twelve months. Though ambition and participation in therapy are important, time and rest are just as important. Patients who find a balance between rest and activity have the easiest recoveries. The first month after surgery is when rest and activity limitation are the most important. Patients are counseled to limit standing and walking to ten minutes per hour early on. Between activity periods, it is important to ice and elevate the leg in order to minimize swelling.

Follow-up appointments are made at six weeks, twelve weeks, six months, and twelve months after surgery. The physical therapists and nurses will be in contact with Dr. Williams during the early stages. If at any point during recovery you have a concern or question, you are encouraged to immediately contact Dr. Williams. He is committed to your care and an excellent outcome.



Home Preparations Prior to Surgery:

- Securely fastened safety bars or handrails in your shower or bath
- Plan easy meals in advance
- Organize your kitchen so that supplies are at shoulder or waist level to avoid excessive lifting, bending, or reaching
- Prepare a sleeping area downstairs if you live in a two-story house
- Clear your house of obstacles and remove any throw rugs for safe walking
- Have a firm chair with armrests available
- Arrange for help from a friend or family member to assist with housekeeping, shopping, or driving
- Be cautious of small pets who could trip you
- Secure handrails along stairways

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COMMON QUESTIONS

QUESTIONS YOU MAY HAVE FOLLOWING JOINT REPLACEMENT

When will I get better?

The majority of your recovery occurs during the first three months. Most patients are more active and feeling better at three months than they were prior to surgery.
A walker is utilized for the first two to six weeks. A cane is then recommended for the next two to six weeks.
Knee replacement patients will use the cane on the same side as the surgery, whereas hip replacement patients will use the cane on the opposite side of the surgery. Limiting activities during the first four weeks is encouraged.
During this time, an emphasis is placed on restricting standing and walking to ten minutes per hour. Icing and elevating the limb is also important the first four weeks after surgery. Swelling is slow to resolve and typically takes six or more months. It is normal to have episodic joint aching during the first year. Joint recovery continues up to a year after surgery. It is important to remember that each patient's speed of recovery is different.

Do I need physical therapy after surgery?

Physical therapy is an important part of your recovery process. Twelve weeks of therapy is recommended following joint replacement. After discharge from the hospital, a physical therapist will visit your home several times a week for three to six weeks. These visits last about an hour. Home therapy will be arranged by a caseworker prior to your discharge from the hospital. Outpatient physical therapy at a therapy center is then recommended for an additional six weeks.

When can I take a shower?

Most patients will resume showering the first day after surgery. If the incision is dry, it is okay to shower without covering the surgical site. If there is drainage from your incision, covering the incision with plastic is recommended while showering. Some patients prefer sponge baths early on. Avoid submerging the incision under water such as in a tub or pool for four weeks after surgery.

Do I need a bandage, and what do I do with the incision?

The dressing is removed while in the hospital. If there is drainage, a clean dressing is kept on the incision. Once the incision is dry, a dressing is no longer needed. It is important to keep the surgical site clean after surgery. If skin tapes are present over the incision, they may be removed three weeks after surgery.
If staples were utilized, your home health nurse or physical therapist will remove them two weeks after surgery. The incision does not require any additional treatment. Do not apply creams or ointments to the incision for four weeks.
After four weeks, it is okay to apply lotion, vitamin E oil, or other topicals if desired.

How should the incision look?

Redness, swelling, and drainage are all normal following surgery. Redness should be within an inch of the incision, a faint, not bright, red, and should decrease with time. Swelling will fluctuate depending on activity levels; rest and ice are effective in minimizing swelling. Ice should be used no more than thirty minutes per hour and never directly on the skin. Drainage should be minimal and decreasing. Drainage should be bloody or clear, not white or cloudy. If there are concerns regarding the incision, notify Dr. Williams' office immediately.

When can I remove the TED hose/support stockings?

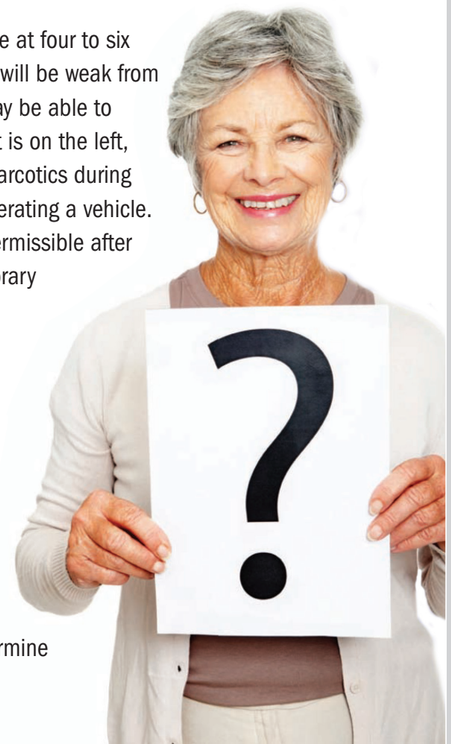
TED hose are recommended for four weeks following surgery. They are helpful in preventing leg swelling and may reduce the risk of forming blood clots. Their use is most helpful during periods of activity. The TED hose should be removed for hygiene, and twice-daily skin checks, at night, or if causing problems. If the TED hose causes pain, skin sores/rashes, or is difficult to wear, they should be discontinued prior to the four week goal.

When can I start driving again?

Patients are typically released to drive at four to six weeks. This is because your muscles will be weak from the surgery and slow to react. You may be able to drive sooner if your joint replacement is on the left, you drive an automatic, you are off narcotics during the day, and you feel comfortable operating a vehicle. Short car trips as a passenger are permissible after four weeks. A form to obtain a temporary handicap parking placard at the DMV will be provided by North Texas Orthopedics.

When can I go back to work?

Most patients can expect to be away from work for six to twelve weeks following surgery. Dr. Williams will review your progress at the six week visit. Your speed of progress and required work activities will determine your expected time of return.



Answers to common questions and insights for your recovery process.

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Blood Thinners

- Xarelto (rivaroxaban): some patients are placed on Xarelto following surgery to prevent blood clots. You should take one tablet every day as directed.
- Aspirin: some patients are placed on aspirin following surgery to prevent blood clots. You should take a 81mg pill in the morning and evening with food for four weeks following surgery.
- Lovenox (Enoxaparin): some patients are placed on Lovenox following their surgery to prevent blood clots. Lovenox is injected into the stomach; once in the morning and once in the evening. Occasionally, minor bruising occurs around the injection site. If the bruising appears excessive, notify Dr. Williams' office.
- Coumadin (Warfarin): some patients are placed on Coumadin following surgery to prevent blood clots. It is important to follow the recommended dosing carefully. You will have blood drawn twice a week by your home health nurse to confirm your Coumadin dose is okay. Adjustment of the Coumadin dose is often required.

COMMON QUESTIONS

Why do I need a blood thinner after surgery?
One of the potential risks of joint replacement is thromboembolic disease, or blood clots. This is why all patients are placed on a preventative medication.

What type of activities/exercises can I perform?
Full weight-bearing and walking are typically allowed immediately after surgery. Short duration walks of ten minutes and leg exercises are recommended for the first four weeks. Leg exercises should be done three times daily for fifteen minutes. At six weeks, you may begin low resistance, stationary bicycles and swimming. At twelve to sixteen weeks, you may resume cycling, hiking, golf, aerobics, and strength exercises, as tolerated. With resumption of all activities, it is important to begin at a relaxed pace and increase slowly as comfort and leg swelling allow. Active sports are generally not resumed until four months after surgery.

Will I need a blood transfusion after joint replacement?
Blood transfusions are infrequent following joint replacement, occurring less than 10% of the time. Factors affecting transfusion likelihood include: starting hemoglobin level, age of patient, prior heart or lung problems, results of daily lab work following surgery, and how the patient feels after surgery. Many techniques are utilized around the time of surgery to minimize bleeding. If you have concerns regarding a possible blood transfusion, please notify Dr. Williams.

What activities should I avoid after joint replacement?
An important goal of surgery is to increase the number of activities you can participate in. However, high impact sports, such as jogging, martial arts, basketball, volleyball, racquetball, and singles tennis, should be avoided. There is concern regarding jumping and running sports and reduced longevity of the joint replacement. Be sure to speak to Dr. Williams if you have questions regarding appropriate activities after surgery.

Is it harmful to rest with my knee bent after knee replacement?
Resting with the knee bent for extended periods of time should be avoided for twelve weeks following surgery. If lost, full knee extension is difficult to regain. When sitting or lying down, a rolled blanket/pillow should be placed under your calf to allow your knee to rest straight.

What positions should I avoid after hip replacement?
There is a low risk of joint dislocation following hip replacement. The first twelve weeks following surgery is when certain hip positions are restricted. These restrictions are called hip precautions and are listed to the right. There are different precautions depending on which approach is used for your surgery. These recommendations will be reviewed with you by your physical therapist.

Will I need pain medications after surgery?
It is expected to have pain after joint replacement. Our goal is to have the pain be well managed. The duration of pain pill use varies from several weeks to several months. Narcotic pain medications should be tapered off six to twelve weeks after surgery. Narcotics should be replaced by Tylenol, Advil, Aleve, or other anti-inflammatories, as long as an allergy or other contraindication does not exist.

What complications should I look for?
If you develop any of the following, contact North Texas Orthopedics or go to the emergency department: high fevers and/or chills, incision concerns, nausea/vomiting, moderate or severe abdominal bloating with constipation, shortness of breath, or severe leg pain that has not been relieved by pain medication.

Feeling blue or tired after surgery?
After surgery, many have a lack of energy. Naps during the day and wakeful periods at night are common. Occasionally, patients may even feel depressed. These are normal physiologic responses to surgery and will resolve in time. Rest and patience are important. As your pain levels decrease and your activity levels increase, your oomph will return.

How can I sleep?
Insomnia, or difficulty sleeping, is common after surgery and improves with time. Some over-the-counter medications like Benadryl and melatonin can help with insomnia. Dr. Williams will also provide prescription sleep aids for a short time after surgery, upon request. After knee replacement, you may sleep in any position that you find comfortable. After hip replacement you may sleep on either side as desired immediately after surgery. It is typically uncomfortable early on to sleep on your side, and most patients avoid it for several weeks. Following hip surgery, it is recommended to sleep with a pillow between your legs for twelve weeks.

Posterior Approach Hip Dislocation Precautions:

- Avoid bending at the hip more than ninety degrees (do not lift knee higher than hip level)
- Avoid sitting in low-lying chairs and sofas that make it difficult to get up from a sitting position
- Avoid crossing legs
- Avoid turning legs in by keeping toes pointing forward or out
- Avoid excessive twisting at the waist; turn your body and feet instead

Anterior Approach Hip Dislocation Precautions:

- Avoid leaning backwards with your thighs against a table or stool
- Avoid excessive twisting at the waist; turn your body and feet instead.

COMMON QUESTIONS

What about dental procedures?
If possible, it is recommended to avoid dental procedures for 3-6 months after surgery. For two years following surgery, antibiotics are recommended prior to dental or other invasive procedures. Patients considered at high risk should use preprocedure antibiotics for life. These antibiotics can be provided by Dr. Williams' office or by other treating physicians.

When can I resume sexual intercourse?
As soon as you feel comfortable. Remember your hip precautions following hip replacement for the first twelve weeks.

What to do with disability forms?
Please give all forms regarding disability to the front desk staff. Please do not give these forms to the doctor. Be aware that there may be a charge per form. Expect three to five working days for these forms to be completed. Fill out the portion of the disability form that is for the patient and leave the doctor areas blank.

How do I get a walker?
A walker will be provided for you while in the hospital. The hospital social worker will make arrangements for a home walker as well as other needed assistive devices.

What about air travel?
Airport security screening will change following joint replacement. Many following surgery, will set off security scans due to metal in their joint. This is not a problem and the security agents are accustomed to the situation. You only need to declare that you have had a replacement. A joint implant identification card will be provided at your twelve week office visit. Recommendations are not to fly for four weeks after surgery and to wait twelve weeks, if possible.

Will I be hungry again?
Some loss of appetite is common for several weeks after surgery. Some patients experience weight loss following surgery. A balanced diet, with an iron supplement, is important to promote proper tissue healing and restore muscle strength. Be sure to drink plenty of fluids.

How should my joint feel after surgery?
Change in the perception or sense of how your joint functions after surgery is normal. Your native joint has been replaced with a mechanical replica, and it will take time to accommodate to the change. This feeling of "change" is more pronounced for knees than hips. Many of these changes are temporary and will resolve over six to twelve months. Other changes are permanent. Hips and knees will occasionally pop or click. These sounds are secondary to scar tissue bands and/or the hard bearing surfaces making contact. Tightness and soreness are very common. These are caused by swelling and muscle fatigue. Following knee replacement, most patients are unable to kneel because it is uncomfortable. Kneeling comfort is improved with a kneeling stool or knee pads. Muscle cramps are infrequent after surgery; if they persist, medications can be prescribed by Dr. Williams to help.

Will I use a motion machine after knee surgery?
Continuous passive motion (CPM) machines are not routinely used following knee replacement. They have not been shown to improve knee motion after surgery. CPMs can increase pain, promote swelling, aggravate bleeding, exaggerate flexion contractures, and inhibit rest.

What if I have difficulty with bowel movements after surgery?
A delayed bowel movement of three to five days after joint replacement is typical, even if your bowel habits are regular. The reason why is multifactorial and includes narcotic use, anesthesia, and decreased activity levels. As long as you are passing flatus, and your stomach is not bloated or painful, there is no need to worry. Eating a high-fiber diet, drinking plenty of fluids, and participating in recommended physical therapy is important. There are also over-the-counter laxatives that can be used short-term to promote return of normal bowel habits. One or two agents can be tried if needed; Dr. Williams typically recommends Colace and Milk of Magnesia.

When can I resume my regular medications?
Your routine home medications will be resumed while in the hospital. It is expected that you will continue taking those medications when you return home. Some patients may be on a routine blood thinner which is stopped prior to surgery. Routine blood thinning medications, such as Plavix, Aggrenox, and Ticlid, are not to be resumed until after the blood thinner prescribed by Dr. Williams has finished. Routine blood thinner medications are to be resumed the day after you finish the blood thinner prescribed by Dr. Williams. It is okay to resume an 81mg Aspirin daily, if prescribed by another doctor, while on the blood thinner prescribed by Dr. Williams. The goal is to avoid being on two potent blood thinning medications at the same time. Non-prescription vitamins and nutritional supplements should also be held until after finishing the blood thinner prescribed by Dr. Williams.

Should I quit smoking after surgery?
Stopping smoking is very important prior to joint replacement. Smokers have a higher risk of blood clots, 10% higher risk of needing a joint revision, 41% higher risk of infection, 53% higher risk of pneumonia, 161% higher risk of stroke, and 63% higher risk of death within one year compared to non-smokers. Though difficult, you should stop smoking at least two weeks prior to surgery and for six weeks after surgery. Your primary care physician is a valuable resource for smoking cessation.

Should I stop drinking prior to surgery?
Alcohol abuse prior to surgery can lead to complications with your surgery. Alcohol use should be minimized prior to joint replacement. Notify Dr. Williams if you have more than two alcoholic drinks per day or have had problems with alcohol withdrawal in the past.

Over-the-Counter Laxatives
- Milk of Magnesia, Miralax
- Benefiber, Citrucel, Fiber Choice, Metamucil
- Colace or Kaopectate
- Ex-Lax, Senokot
- Bisacodyl, Pedia-Lax, Dulcolax

COMMON QUESTIONS

Do I have a metal joint and what about metal allergies?

All total hip and knee replacements have metal parts. Four main parts make up each total joint. In a total hip replacement, the motion occurs between the ball, or head, and the socket, or liner. The important question to ask is, "What are the parts made of where the joint motion occurs?" These articulating parts can be made of metal, ceramic, or plastic. The available joint couples on the market today are metal-on-metal, metal-on-plastic, ceramic-on-ceramic, and ceramic-on-plastic as depicted in the picture below. The likelihood of having a metal allergy to a total joint replacement is very small. Metal allergies are most associated with joints using a metal-on-metal couple, as in a metal head articulating with a metal liner. Dr. Williams rarely uses this combination of implants. If you have a skin reaction to metal jewelry please notify Dr. Williams prior to surgery.

What leg exercises will I do after surgery?

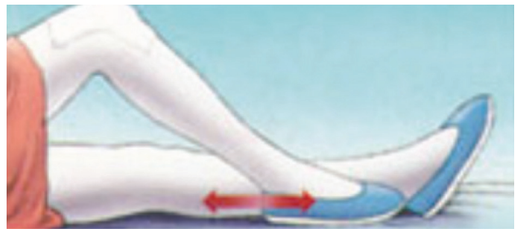
Leg exercises should be done three times a day for twelve weeks.
The exercises should take about fifteen minutes to complete.
Each exercise should be done for two to three minutes. Not all exercises may be possible immediately after surgery. Ice and elevation are recommended following exercise.

- Quadriceps Sets: Tighten your thigh muscle and try to straighten your knee. Hold leg position for five to ten seconds.

- Straight Leg Raises: Tighten your thigh muscle with your knee fully straightened on the bed, as with the Quad set. Lift your leg several inches off the bed and hold for five to ten seconds. Slowly lower your leg and repeat until your thigh feels fatigued.

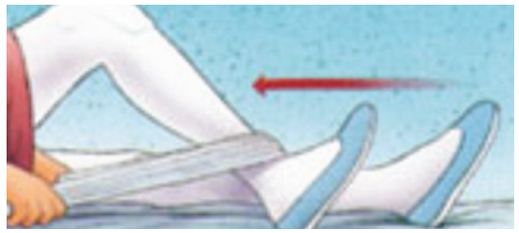
- Ankle Pumps: Move your foot up and down rhythmically by contracting the calf and shin muscles. Perform this exercise for two to three minutes. This exercise should be done periodically throughout the day, as it can prevent blood clots.

- Knee Bends/Heel Slides: Bend your knee as much as possible while sliding your foot on the bed (for hip replacement patients, do not bend hip past ninety degrees). For knee replacement patients, hold your knee in a maximally bent position for five to ten seconds and then straighten.

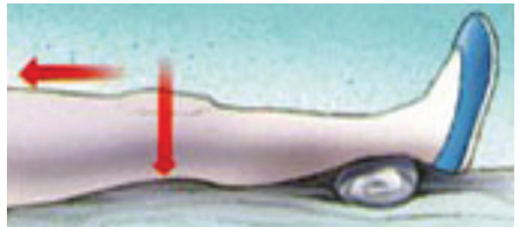


- Hip Abductions (Hip Replacement Only): Lie on your side with the replaced hip up. While holding your knee straight, lift your foot as high as you can and hold that position for five to ten seconds.

- Assisted Knee Bends (Knee Replacement Only): Lying on your back, place a folded towel over your operated knee and drop the towel to your foot. Bend your knee and apply gentle pressure through the towel to increase the bend and hold for five to ten seconds.



- Knee Straightening Exercises (Knee Replacement Only): Place a small rolled towel or pillow just above your heel so that your leg is not touching the bed. Tighten your thigh and try to fully straighten your knee so as to touch the back of your knee to the bed. Hold knee fully straightened for five to ten seconds.



- Sitting Supported Knee Bends (Knee Replacement Only): While sitting at bedside or in a chair with your thigh supported, place your foot behind the heel of your operated knee for support. Slowly bend your knee as far as you can. Hold your knee in this position for five to ten seconds. Repeat several times until your leg feels fatigued.

- Sitting Unsupported Knee Bends (Knee Replacement Only): While sitting at bedside or in a chair with your thigh supported, bend your knee as far as you can until your foot rests on the floor. With your foot lightly resting on the floor, slide your upper body forward in the chair to increase your knee bend. Hold the knee in a bent position for five to ten seconds and then straighten your knee fully. Repeat several times until your leg feels fatigued.

NORTH TEXAS ORTHOPEDICS
THE STRENGTH OF EXPERIENCE

FACTOIDS

INTERESTING FACTS

1. The average joint replacement weighs less than a pound.
2. The first joint replacements were made of ivory.
3. Your joint replacement is made of titanium, cobalt chromium, polyethylene, and ceramic.
4. Only 1/4 of an inch or less of bone is removed for knee replacement surgery.
5. No height is gained or lost with a knee replacement.
6. A bent or crooked knee is straightened during knee replacement.
7. Height can be added with a hip replacement when needed.
8. The first recorded partial hip replacement was done by a German Professor, Themistocles Gluck, in 1891.
9. In 1942, Vitallium was the first metal used in joint replacement by Dr. Austin Moore.
10. Beginning in 1962, Sir Robert Charnley became the father of modern total hip replacement.
11. The first knee replacements done in the 1950's were a simple hinge design.
12. The birth of modern knee replacement was in the early 1970's in the USA.
13. Surgical space suits are worn by the operating team during joint replacement.
14. Arthritis cannot return following joint replacement.
15. Partial knee replacement is an option when arthritis is limited to a small part of the knee.
16. There are over a hundred different types of arthritis.
17. Over 700,000 joint replacements are done per year in the USA.
18. Knee replacements often require cement to fix them to the body.
19. Polymethylmethacrylate (PMMA) or "bone cement" was developed in 1928 and was first used in healthcare in dentistry.
20. Most hip replacements are "press fit" like a cork in a bottle into the body without cement.
21. The metals used in hip replacement have a three dimensional structure, allowing bone to grow into the implant forming a "biologic lock."
22. Highly cross-linked polyethylene (the plastic) became available in 2001 and has significantly improved implant longevity.
23. Hip replacement incisions are typically three to six inches.
24. Knee replacement incisions are typically five to eight inches.
25. Bilateral hip and knee replacements can be done on the same hospitalization.
26. Joint replacements are anticipated to last over 20 years.
27. Hip replacement, per population size, is most common in Germany, Switzerland, and Belgium.
28. Knee replacement, per population size, is most common in Germany, USA, and Switzerland.
29. Harold E. Weary of Illinois, 103 years old, is the oldest recorded patient to have had a hip replacement.
30. Celebrities with joint replacements include Billie Jean King, Billy Joel, Mary Lou Retton, Jane Fonda, Jack Nicklaus, George Bush, Sr., Queen Elizabeth, Bo Jackson, Katherine Hepburn, Rev. Billy Graham, Ray Charles, Eddie Van Halen, Coach K, Mike Ditka, Luciano Pavarotti, Charlton Heston, George Karl, Michael Douglas, Mark Cuban, and Floyd Landis.
31. The joints most commonly affected by osteoarthritis are the back, knees, hips, and hands.
32. The most commonly replaced joints are knees, hips, shoulders, and fingers.

Experience That **Moves You**

The main goal after surgery is to regain your independence and return home.

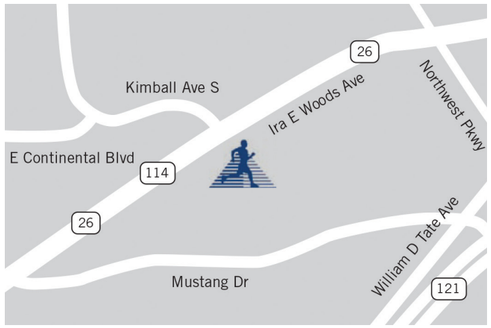
Hospital Social Worker Services:

- Arrange for home physical therapy
- Arrange for home walkers and other needed aids
- Arrange for inpatient rehab if needed

NORTH TEXAS ORTHOPEDICS
THE STRENGTH OF EXPERIENCE

CONTACT INFORMATION

Facility Contact Information



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Useful Websites

American Academy of Orthopaedic Surgeons Patient Portal:
www.orthoinfo.aaos.org/main.cfm

American Association of Hip and Knee Surgeons Patient Portal:
www.aahks.org/patients/patients.asp

North Texas Orthopedics Patient Portal:
www.ntxortho.com

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