ROGER FONTES, M.D.

TOTAL JOINT REPLACEMENT

PATIENT EDUCATION PACKET

DESERT
ORTHOPAEDIC
CENTER

Experience. Excellence.

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Welcome to the Total Joint Replacement Program with Roger Fontes, M.D.

On behalf of Dr. Roger Fontes and Desert Orthopaedic Center, we would like to welcome you and thank you for choosing us for your total joint surgery.

Our goal is to ensure the highest standards of medicine and a high-quality experience for you. We are committed to keeping you informed and helping you become an active partner in your health care. We will do everything we possibly can to make your surgery and recovery as pleasant as possible.

You will find important instructions and information to prepare you for your surgery in this education packet. It will answer many of the questions you may have, and clearly outline the things you need to do before, during and after surgery. Planning tools, advice on medications, diet and exercise are also included. Please take the time to read this material carefully.

If you have further questions about your surgery, please call Dr. Fontes' team at (702) 498-0212. Once again, thank you for choosing Dr. Roger Fontes and Desert Orthopaedic Center for your orthopedic care.

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Initial Consulation with Dr. Fontes

One could think of a joint replacement as a journey. It begins with the decision to have a joint replacement and ends, typically, with a fully functional joint with minimal or no pain. The goal of this educational packet is to give you information about joint replacement surgery from the beginning to the completion of this journey. It is also our intent that this section can be a reference that you can return to, as needed, to refresh your knowledge. It is our belief that knowledge is powerful, and we hope to give you as much knowledge as we can.

MAKING THE DECISION TO PROCEED WITH SURGERY

Perhaps the most important part of the journey is making that first step - the decision to proceed with joint replacement surgery. Several factors must be carefully considered when making this momentous decision. We believe it is very important for patients to be fully informed of the risks and benefits of the procedure when making this decision. Another factor that cannot be neglected is a patient's expectations of the recovery process. It has been our experience that most patients who come to see us about joint arthritis already have a complex set of pre-conceptions of what the surgical recovery will be like. Some of these may be accurate and some of them may not. We will spend as much time as necessary to review these expectations and how they align with what we have seen in our experience. In general, patients are pleasantly surprised by the recovery process and tell us that the experience was "better than expected" in most cases. We think this is an important factor when people are weighing whether to proceed with surgical replacement of their joint. After all, most everyone knows their current pain and functional limitations but they don't know the impact the surgery will have on their function and pain in the days and weeks after surgery.

MEDICAL OPTIMIZATION BEFORE SURGERY

When we discuss the indications for joint replacement surgery, we will be determining the severity of arthritis on your x-ray and/or alternative imaging. We will be discussing how severely the pain and functional loss impacts the quality of your life. We will also talk about measures you have tried in the past to alleviate pain and improve function.

We will also need to review your medical condition to determine whether you are medically suited for surgery at this time. Unfortunately, we do find patients who have medical or other conditions which need to be improved or optimized to reduce the risk of joint replacement surgery.

One example of this would be patients who smoke. It has been clearly shown that smoking dramatically increases the risk of wound healing problems and infection after joint replacement.

https://www.webmd.com/smoking-cessation/news/20101019/smoking-raises-surgery-risks

Another factor that dramatically impacts the risks of surgery is obesity. If we identify risks that can be addressed and reduced, we will delay your surgery until you are "medically optimized". Several studies have shown that obesity is an independent risk factor for infection and blood clot. These are just two examples of risks that we will be addressing if necessary.

https://www.ncbi.nlm.nih.gov/pubmed/28042116

Initial Consulation with Dr. Fontes - Continued

ANETHESIA CONSIDERATIONS

There are two anesthesia options when having a hip or knee replacement – general anesthesia or spinal/regional anesthesia. General anesthesia involves being placed "completely asleep" with a breathing tube placed down your trachea and gas or inhaled anesthesia used during the procedure. Spinal anesthesia refers to a single injection of a medication in the lower level of your spine that will make you completely numb from the bellybutton down for about 2 to 4 hours. This can be combined with regional anesthesia which is a local injection around one or more nerves to help reduce pain for up to 24 hours after surgery.

While general anesthesia has traditionally been used for joint replacement surgery, spinal anesthesia is now considered the standard of care by most physicians in most centers. Multiple studies have shown the advantages of spinal anesthetic and regional blocks for patients undergoing total hip and total knee arthroplasty. These studies have shown that spinal anesthetic results in lower post-operative pain scores, lower blood loss, reduced risk of blood clots, faster mobility, and less nausea and mental confusion.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4515222/
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4357526/

Many patients are fearful that they will "be awake during surgery" if we do not use gas anesthetic. This is definitely not the case. Intravenous anesthesia (Propofol – the same drug used during colonoscopies) is always administered in addition to spinal anesthesia so that the patient is completely unaware of the procedure. In other words, you will be asleep. The principal advantage of spinal anesthesia is that the general anesthesia does not need to be quite as deep or extensive and therefore a breathing tube is not required. The other major advantage of regional anesthesia or spinal block is long term post-operative pain reduction which reduces the need for narcotics and other pain medications. Furthermore, there is increasing evidence that general anesthesia may have negative long-term effects on the brain.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6443620/

We have been using spinal anesthesia for almost all patients undergoing a joint replacement with excellent results for the past 12 years. Our results are consistent with the published studies - much less pain, less nausea, less grogginess and faster mobility.

Intake Assessment with Our Medical Assistant

Once the decision has been made to proceed with surgery, our medical assistant (MA) responsible for scheduling surgery will come in and perform an intake assessment.

TIMELINE

Our MA will review with you the timeline of the pre-operative clearance process which can extend anywhere from 4 to 8 weeks.

MEDICATIONS REVIEW

Our MA will review all your current medications. Our MA will be looking for medications that need to be stopped before surgery usually because they cause an increased risk of infection or bleeding. Make sure you leave the office with written instructions about which medications to stop taking and how long before surgery.

SCREENING FOR METAL ALLERGIES AND DVT HISTORY

You will be given a screening questionnaire about possible presences of metal allergies which could affect to the type of implant you receive. We do have implants specifically designed for patients that have metal allergies.

Our MA will ask you about any history of deep venous thrombosis (blood clots or pulmonary embolism) that you or one of your close family members may have. This will affect the type of blood thinner we will use after surgery. Patients with no history of DVT and considered low risk will be placed on baby aspirin twice a day for 30 to 35 days. Patients with a history of DVT or those who have a close family member with DVT, may be placed on a more aggressive blood thinner regimen such as Lovenox or Xarelto.

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The Pre-Operative Clearance Process

REQUIRED TESTS AND MEDICAL CLEARANCES FROM ADDITIONAL DOCTORS

The next step in this journey will be obtaining a pre-operative clearance. This involves a combination of **blood tests, chest x-ray, EKG** (possibly combined with other tests such as a stress test for the heart or pulmonary function tests), **and visits with various physicians to review your medical condition and determine whether you are "safe" for surgery.** Healthy patients with little or no medical comorbidities are generally seen exclusively by their family physician. Patients who have seen a cardiologist in the past often need to see a cardiologist again for surgical clearance. The more medical conditions that must be addressed, the longer this process can take. **We require that all medical clearances, labs, imaging studies be collected by our office before scheduling surgery.** Our team will help you through this process and we will frequently check in with you to assess which items have been completed and which are still needed. In general, this process takes between 4 and 8 weeks.

SCHEDULING

Once we have determined that all or nearly all testing and clearance letters have been completed, we will contact you to determine a surgical date. This will typically be approximately 2 weeks from the date of the phone call but may be longer if the schedule is extremely busy or if Dr. Fontes is unavailable. We typically perform joint replacement surgeries on Tuesday and Thursday, but occasionally other days of the week are used as well. The centers at which we do joint replacement include Siena Dignity Hospital and Henderson Hospital. We perform outpatient total joints at Parkway and DOC surgery centers on medically and surgically appropriate patients.

PHYSICAL THERAPY ASSESSMENT AND TOTAL JOINT EDUCATION CLASS

Preparation for surgery, recovery and a pre-planned discharge are an important part of your care. For non-Medicare patients, we encourage you to contact the hospital where your surgery will be performed to inquire about a total joint education class. We encourage you to bring with you to class the person who will be helping you after your surgery so they will better understand what you have been through and what care you will need after surgery. This is usually a family member or close friend.

The class will give you a better understanding of what to expect before, during and after surgery and help you feel more comfortable and prepared for your upcoming procedure. You will be given a chance to ask questions that you may have and clarify information that may be confusing to you. You will also be instructed on important equipment that you will need during your recovery period. Please remember this packet is only a guide with recommendations.

Please bring this packet with you to office visits with Dr. Fontes, the physical therapy assessment/joint education class and to the hospital on the day of admission.

The class will review the following:

- Total joint replacements
- Before surgery and after surgery information
- Written exercise instructions
- Nutritional information
- An overview of your hospital and surgical experience

The Pre-Operative Clearance Process - Continued

TELEPHONE INTERVIEW WITH THE D.O.C. NURSE CASE MANAGER FOR MEDICARE PATIENTS
You be asked to complete a nursing interview prior to your admission. The nurse case manager from Desert Orthopaedic Center will contact you to complete this interview. It is important for us to "get to know you" so that we can anticipate your needs. **Please have your medication list completed as the nurse will ask for this information.**

PRE-OPERATIVE HISTORY AND PHYSICAL EXAMINATION BY OUR PHYSICIAN ASSISTANT/NURSE PRACTITIONER
We will have you come to the office for a pre-operative history and physical examination. This visit serves multiple purposes. The first is for us to review all medical testing and physician reports. The second is to perform a physical and make sure you are ready for surgery from an orthopedic standpoint. Occasionally, we order new x-rays as well. The third is to give you your post-operative prescriptions. This will include an oral narcotic and an oral anti-inflammatory. If you were assessed to be at high rish for blood clots, you will be given a prescription for a blood thinner. Otherwise we will have you take an 81mg baby aspirin twice daily for 30-35 days after surgery. It is **critical** that your prescriptions are filled **before you come to the hospital for your surgery so that they are waiting for you at home when you are discharged**. Lastly, we will ask you to leave with us your patient consent form and your total joint replacement quiz that are included at the end of this packet. The purpose of the quiz is to ensure you have read this manual with a purpose and make sure that you understand the key facets of the total joint replacement process. It is critical that you bring your completed consent form and quiz to your pre-operative history and physical examination.

In summary, your pre-operative history and physical examination appointment by our physician assistant includes:

- Reviewing of all medical testing and reports
- Performing a physical examination
- Repeating x-rays if necessary
- Reviewing all prescriptions
    - Narcotics
    - NSAIDS (Meloxicam or Celebrex)
    - Antibiotic
    - Blood Thinner (Aspirin or alternative)
- Patient Informed Consent Form
- Total Joint Replacement Quiz

Important Information Regarding Your Surgery

INFECTION PRECAUTIONS
Health problems such as allergies, diabetes and obesity as well as hematocrit levels less than 36 can create an elevated risk of infection. Be sure to discuss this with either Dr. Fontes, our physician assistant or our medical assistant.

After your surgery, family and friends should not touch your surgical wound or dressings and they should wash their hands before and after visiting. Those caring for your wound should always wash their hands before and after contact.

Avoid touching your hands to your nose, mouth or eyes and do not set food or utensils on furniture or bed sheets. Germs can live for many days on surfaces and can cause infection if they get into your mouth.

DENTAL WORK
If you need dental work, it is a good idea to get it done **at least two weeks before your surgery**. If you have not seen a dentist in the last twelve months, we request that you make an appointment for a dental exam, because the threat of infection is a major risk factor of joint replacement. A silent or unknown infection in your mouth could travel through your bloodstream and cause an infection around your prosthesis which can be devastating to your new joint. Tell your dentist you will be having a total joint replacement, so the information can be placed in your dental record. Your dentist may want you to take antibiotics before any future dental work. We want you to avoid all non-critical dental work for 3 months after surgery.

MEDICATION
Be sure to inform Dr. Fontes of ALL the medications you are taking, including vitamins, over the counter drugs (such as aspirin, antacids, pain relievers, etc.) or even herbs and "natural" products. These can all have unwanted effects when combined with medications or anesthesia. Some herbal and diet products must be stopped at least two weeks before your surgery. In order to minimize the risk of blood loss during and after surgery, you will be asked to stop taking certain medications, many of which can affect blood clotting.

Aspirin, Ibuprofen, Motrin, Advil, blood thinners, anti-arthritis medications, diet pills, and MAO inhibitors are examples of medications that can cause increased bleeding times.

You will be instructed on which of your routine medications you will need to take the morning of surgery, when the nurse calls you the day before surgery. You are encouraged to discuss any concerns you may have with Dr. Fontes or prescribing physician.

DIABETES MEDICATION
Check your blood sugar before meals and at bedtime for **at least two (2) days prior to your surgery** (if you check more often, continue your routine). Call the nurse case manager if your blood sugar is higher than 150 twice. You will be advised by our physician assistant durning your history and physical examination if you should take your medications or insulin the morning of your surgery.

Important Information Regarding Surgery - Continued

SMOKING

In preparation for your surgery, it is best not to smoke - SMOKING IS A MAJOR RISK FACTOR FOR WOUND HEALING COMPLICATIONS. **Patients who smoke are three times as likely to develop a surgical site infection as nonsmokers and have significantly slower recoveries.** If you are a smoker, ask your doctor what would work best for you to help you quit smoking. The longer you are smoke free, the healthier your lungs will be.

NUTRITION

Good nutrition is important before surgery. Eating healthy and avoiding any unnecessary weight loss prior to your procedure is optimum. Many patients are asked to lose some weight prior to their procedure; at this time, we recommend weight maintenance with a goal of having adequate nutrition stores before heading into surgery.
This will help make sure you will have the strength post-surgery for rehabilitation.

Prior to your surgery your diet should include:

- Protient - high quality, low fat protein is a key component of a healthy diet
- Fruits - 2-4 servings per day of your choice
- Vegetables - 3-5 servings per day of your choice
- Dairy/Milk - 2-3 servings per day
- Fats – use sparingly. Some fat is a necessary part of our daily diets but less is better. Avoid fats & trans fats whenever possible.

Home Planning and Preparation

It is a good idea to prepare your home for your hospital discharge **before** you go to the hospital.

Recommendations:

- If your bedroom is upstairs, you may consider setting up a temporary sleeping area on the first floor. Most patients after a total joint are able to climb stairs (in fact they will work on this at the hospital) but if the option exists of a downstairs bedroom this would be ideal.
- Remove all throw rugs, loose rugs, electrical cords and clutter from hallways/walking areas. These pose a risk for falling.
- Check your cabinets for items you routinely use and place them at a level where you will not need to bend or get on a step stool to reach them.
- Have extra pillows or pads for chairs, sofas and automobile seats to elevate the seat to insure proper hip alignment.
- Install safety bars in the shower and near stair railings and put non-skid material in the bathtub or shower.
- You will receive instructions on discharge and need to consider the following: a long-handled sponge/brush and shower hose for bathing, a shower chair or tub bench so you are able to sit in the shower.
- A basket to attach to a walker, if necessary.
- Prepare an area for supplies you will need, such as a telephone, TV remote control, radio, tissues, medication, reading material, etc.
- Make preparations for pets that may be underfoot.
- Consider activities that you will be able to engage in during your recovery such as hand games, movies, DVD's etc.
- Make arrangements to have a family member or friend stay with you the first few days after you are discharged.

You should arrange to have the following items at home before you depart for surgery, so they will be ready and waiting when you arrive home after discharge.

- ALL of your post-operative medications prescriptions will be given to you during your history and physical appointment with either Laura Rodriguez, PA-C, Tiffany Alvarez, NP, or Dr. Fontes the week before surgery. **YOU SHOULD FILL THESE PRESCRIPTIONS BEFORE SURGERY AND HAVE THEM WAITING FOR YOU AT HOME.**
- A dressing change. If you are having a hip replacement, the dressing needs to be long enough to cover a 15cm / 6in long incision. If you are having a knee replacement the dressing should be long enough to cover a 25cm / 10in incision.

Equipment such as walkers, crutches, and canes will be coordinated through the Desert Orthopaedic Center nurse case manager at (702) 687-7262.

One to Three Days BEFORE Your Surgery

SCHEDULING POST-OPERATIVE OUTPATIENT PHYSICAL THERAPY

For those who are undergoing a knee replacement, the physician assistant will give you an order for outpatient physical therapy. We prefer that you use Desert Orthopedic Center's own physical therapists but if you have a therapist that you have used in the past or one is more conveniently located close to your home, feel free to make an appointment with them. **You should call physical therapy before your surgical date to arrange for your first appointment to occur within 3 to 6 days after your surgery date.**

Our total hip arthroplasty patients almost never need physical therapy on an outpatient basis. When Dr. Fontes first began performing direct anterior hip replacement, we used physical therapy because that was his standard practice with posterior hip replacement. However, he, and most of his colleagues who transitioned to direct anterior hip replacement, quickly realized that outpatient physical therapy resulted in no measurable improvement in their patients and, in some cases, actually delayed their recovery. Now we choose to use physical therapy on a very limited and case-by-case basis. If you have any questions about this, please discuss this with the physician assistant or Dr. Fontes.

REGISTRATION AT THE HOSPITAL ONE TO THREE DAYS BEFORE SURGERY

We require that you pre-register at the hospital before surgery. **It is required that you go to the hospital in person to complete the registration process.** Occasionally, new labs will need to be obtained if your prior blood tests were over 30 days old. We apologize but this is required by the hospital and anesthesiologist. At times, when patients call to make an appointment for pre-operative registration, they are told by the registration personnel that it is not necessary for them to come to the hospital physically. Ignore this advice. **It is our policy that you must go to the hospital before the surgery day to pre-register.**

PHONE CALL FROM DR. FONTES' TEAM TO SCHEDULE SURGERY TIME AND ARRIVAL TIME

You will generally be called by a member of Team Fontes with your surgery time and arrival time at the hospital 1-2 business days before the surgery. If you have not been contacted, please call Team Fontes at (702) 498–0212 between the hours of 8 AM and 4 PM to confirm your schedule surgery time and when you are to report to the hospital. You will be asked to arrive 2 hours before your scheduled surgery time to allow for: completing the intake forms, getting the IV established, shaving and prepping the skin, and meeting with the anesthesiologist and Dr. Fontes prior to surgery.

PLEASE NOTE: If you are given contradictory information by the hospital (for example, time of surgery), please contact Team Fontes IMMEDIATELY to clarify.

PRESCRIPTION FILLING

Make sure you have your prescription filled prior to your surgery day. Call the Team Fontes cell phone if you have any trouble filling your prescription. Beware many pharmacies have very limited supply of certain medications so don't wait until the last minute to get it filled.

The Day BEFORE Your Surgery

BATHING INSTRUCTIONS

Before surgery, you can play an important role in your own health. Because skin is not sterile, we need to be sure that your skin is as free of germs as possible before your surgery. You can reduce the number of germs on your skin by carefully washing before surgery. Following these instructions will help you to be sure that your skin is clean before surgery to help prevent infection.

- You will need to shower with a special antibacterial soap called chlorhexidine gluconate (CHG). A common brand name for this soap is Hibiclens, but any brand of CHG is acceptable to use. This soap is available at most pharmacies. If you do not see it on the shelf, please asked the pharmacist if they carry it.

- CHG is not to be used by people allergic to chlorhexidine. **Shower or bathe with CHG the night before surgery and the morning of surgery.** Apply the CHG soap to your entire body but only from the neck down. Do not use CHG near your eyes or ears or face.

- Pay special attention to the area where the surgery will be performed. Gently wash for 5 minutes, do not scrub the skin too hard. Do not use regular soap after the CHG is applied.

- Do not shave your body with a razor before surgery. Also do not use perfume, deodorant, powders, lotions or creams after showering.

DO NOT EAT OR DRINK ANYTHING AFTER MIDNIGHT (N.P.O.)

Do not eat or drink anything after midnight (this includes hard candy or gum). You may drink clear water only up to 4 hours before your surgery. Do not drink alcohol the day before your surgery.

Surgery Day Timeline

THE MORNING OF YOUR SURGERY

- Take only those medications you were instructed to take by your physician, physician assistant, or nurse. Take these medications with a small sip of water.
- Shower using the same bathing instructions detailed on page 17.
- You may brush your teeth. Do not swallow water.
- Do not use perfumes, deodorants, powders, creams, make-up or nail polish.
- Bring a case for your eyeglasses, hearing aids and dentures. Do not bring or wear contact lenses.
- Wear comfortable, nonskid, or rubber soled shoes such as walking shoes or tennis shoes. Slip on shoes as long as they are stable, are a good idea.
- Bring personal items such as toiletries and daily care items.
- Leave valuables, money and jewelry at home.
- **Note: If you have a condition called "sleep apnea" and require special equipment, please bring the equipment with you when you arrive for surgery.**

ARRIVAL AT THE HOSPITAL AND PRE-OPERATIVE INTAKE

What time and Where to Arrive

You will generally arrive at the hospital 2 hours before your planned surgery start time. You will need to follow each hospital's specific instructions on where to show up on the day of your surgery.

Meeting with the Pre-Operative Nurse

Once you arrive and have checked in, you will then be brought into the pre-operative holding area and meet the pre-operative nurse. Here they will review your planned procedure and verify that you had nothing to eat or drink for the appropriate time before surgery. The surgical site will be identified and shaved free of hair if necessary. Special skin cleansing may be performed as well. They will also start an intravenous line.

Meeting the Anesthesiologist and Dr. Fontes / Marking Incision

Dr. Fontes and the anesthesiologist will meet you at this point. Typically Dr. Fontes will mark out your planned surgical incision and answer any last-minute questions.

Family Members

A family member or two can accompany you during your pre-operative intake process. They will be asked to go to the surgical waiting area once you are called back to the operating room. It is important to note that typical surgical time (what surgeons "skin-to-skin time" - skin incision to skin closure and dressing application) is between 1 and 2 hours. However, from the patient's family perspective, the surgery process can take between 3 and 5 hours. This additional time includes transporting you into the operating room, starting anesthesia, positioning you on the operating table, taking pre-operative x-rays for our total hip arthroplasty patients, and prep and drape sterilely for the procedure. In addition, the patient will then spend at least 1 hour in the post-operative recovery area or PACU. **In summary, the family should expect that they will be waiting between 3 to 5 hours before they can see the patient in his or her hospital room.**

Dr. Fontes will call or physically visit the family after surgery. Many operating room waiting areas are crowded so we find it easier to talk privately over their cell phone in these occasions - please remind them to keep their phones on.

Surgery Day Timeline - Continued

SURGICAL PROCEDURE PROCESS

Anesthesia

A critical component of today's minimally invasive, rapid recovery joint replacement is anesthesia. It starts with a "pre-operative cocktail" combining several oral medications to reduce pain. A critical component is the anesthesia itself. Almost all our joint replacement surgeries are performed with a combination of regional nerve blocks and/or spinal anesthesia as discussed earlier in this packet.

Some patients express concerns that they have degeneration in their spine or have had previous spine surgery. Please discuss this with your anesthesiologist. The anesthesiologist will generally attempt a spinal anesthetic, and, in most cases, they are successful despite pre-existing degeneration of the spine or previous surgery. They will discuss the specific pros and cons of this anesthesia.

Surgery

Surgical time is typically 60 to 90 minutes.

POST-OPERTATIVE CARE IN THE RECOVERY ROOM (PACU)

The PACU is where you will recover from surgery and anesthesia. The recovery room nurse will be supervising this process. Your pain levels will be assessed and treated as appropriate. Typically patients have little to no pain and are awake and alert within 15 minutes of surgery. Some sips of water and even crackers may be given at this time. Total time spent in the PACU can range between 60 minutes to 4 hours. One major source of delay in leaving the PACU is overcrowding on the floor rather than medical reasons. The recovery room nurse will contact your family if delays occur.

ARRIVAL ON THE ORTHOPEDIC FLOOR

You will be transferred to your room from the PACU. The floor nurse will perform an intake process which include assessing your pain, measuring your temperature and vitals, and checking your dressing.

Family Visitation

At last, your family can visit you! Typically this is the time where some solid food and drink will be permitted.

Physical Therapy

Our physical therapists are trained to see you as soon as possible after your arrival on the floor. Our goal is to have you up and walking within 4 hours of the surgical time if possible.

Hospitalist Visit

A hospitalist is an inpatient internal medicine specialist whose practice of medicine is exclusively limited to patients in the hospital. They serve several very important roles in your recovery process. First, they are responsible for the medical side of your recovery including blood pressure management, pain management, and management of your major organ systems. Additionally, they handle many of the day-to-day clerical tasks involved in an inpatient stay including your discharge paperwork.

Surgery Day Timeline - Continued

Intravenous Fluids and Medications

Your IV will generally remain in place for 1 day. You will receive IV fluids until you are able to eat and drink without nausea. You will receive IV antibiotics for the first 24 hours. Your IV access may also be used for intravenous pain medication if oral medications are not enough.

Pain Control

Pain control is a critical part of a successful joint replacement surgery. This begins before surgery with a cocktail of different medications which work together (synergistically) to block different pain pathways where pain is produced and felt. This will continue after surgery. Spinal and regional anesthetic techniques also help significantly with post-operative pain. Some post-operative medications will be ordered "routine" - which means they will be given to you without you having to ask. Some medications will be PRN - this means they will be provided to you as needed for breakthrough pain. Our goal is to keep your pain tolerable (2 - 5 on the 1 - 10 pain scale) while reducing narcotics.

http://m2.wyanokecdn.com/8f7797bf365f947b3b1deccaee570387.pdf
https://www.ncbi.nlm.nih.gov/pubmed/28042116

Dressings / Bandages / Icing

You will have a dressing over your incision to protect your wound and promote healing. We typically use a silver impregnated dressing such as Mepilex or Aqua Cell which have been shown to reduce bacterial colonization and reduce the risk of wound infection. This dressing is waterproof and allows you to shower immediately. It is designed to stay on for 7 days. It should be removed and replaced on day 7 with an over-the-counter dressing you can purchase at CVS or Walgreens or online. You will find mesh glued to the skin under your surgical dressing. **This should not be removed.** It is a good idea to keep a dressing over the wound for 2 weeks. Ice will be applied immediately after surgery to your incision area. 15 to 20 minutes of icing every hour is a critical component of swelling reduction and pain relief. This will be continued at home as well.

PICO Suction Dressing after Total Joint Arthroplasty

PICO (or similar) Suction Dressing after Total Joint Arthroplasty:

The PICO suction dressing, a type of negative pressure wound therapy (NPWT) system, represents a significant advancement in post-operative care, especially after surgeries like total joint arthroplasty. Unlike traditional dressings, which primarily serve as protective barriers, the PICO system actively aids the healing process by applying a gentle vacuum over the surgical site. This negative pressure not only helps remove fluids and potential contaminants from the wound area but also promotes blood flow, enhancing tissue regeneration and reducing the risk of complications.
Dr. Fontes will use this dressing if he has concerns about wound healing.

Patient Instructions

1. Daily Monitoring:

- Inspect the dressing daily to ensure it's sealed and remains adhered to the skin. If any edges are lifting, press them down firmly using clean hands.
- Monitor for increased redness, discharge, or any signs of infection around the wound site. If you notice anything unusual, contact your healthcare provider.
- Check the PICO device's indicator light. A green flashing light indicates it's functioning properly, while a red light or no light at all may signal an issue that needs attention.

2. Activity and Movement:

- You can resume normal activities, but be cautious not to dislodge the dressing or tubing.
- Do not stretch, pull, or put tension on the dressing.
- When showering, it's recommended to cover the dressing with a waterproof cover to prevent it from getting wet. The PICO dressing itself is not waterproof, and the device should never be submerged in water.

3. Battery and Operation:

- The PICO dressing is powered by a battery which typically lasts for the duration of the therapy, usually 7 days. If the battery runs out before this time, contact your healthcare provider.
- If the dressing makes a constant noise or the alarm sounds, this might mean there's a leak. Check the dressing's seal and press down any edges that may have lifted.

4. Dressing Changes and Removal:

- The PICO dressing is typically left in place for up to 7 days unless otherwise directed by your healthcare provider. Do not attempt to change or remove the dressing unless instructed.
- If the dressing becomes full of fluid or is no longer adhering properly before the scheduled change, contact your healthcare provider.

5. Disposal:

- Once your therapy is complete, or if the dressing needs to be changed, turn off the PICO device by pressing and holding the ON/OFF button until the light goes out.
- Dispose of the PICO device and dressing as instructed by your healthcare provider. Do not attempt to reuse.

These are general guidelines, and patients should always follow the specific instructions given by their healthcare provider or surgeon. If any concerns or complications arise, or if there are questions about the PICO dressing's usage, patients should contact their medical professional promptly.

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Day AFTER Your Surgery While in Hospital

SURGEON AND/OR MID-LEVEL VISIT

Everyone on our team has a critical role and purpose. The role of Dr. Fontes during your hospitalization is principally surgery - **that is Dr. Fontes' expertise**. One of our two mid-level assistants will typically see you in the hospital - **that is their area of their expertise**. They report to Dr. Fontes every detail of your progress. The hospitalist also reports directly to Dr. Fontes on a daily basis.

DISCHARGE PLANNING

We start the discharge planning process before surgery is performed. Part of this process occurs when we give you your post-operative prescriptions at your pre-operative history and physical exam. It is critical that you get these medications before you come to the hospital for your surgery so that they are waiting for you when you get home. There is a discharge planner on the floor who arranges for durable medical equipment such as a walker to be sent to your house. We find that our patients almost never need other more specialized equipment such as a shower chair or an elevated toilet seat. The physical therapist will help assess any unusual needs you may have.

DISCHARGE HOME

Most patients will be ready for discharge the day after or two days after surgery. This is determined by a variety of factors including your pain levels and what medications are necessary to control your pain, your progress with physical therapy, and your individual needs at home. **You will need to have a friend or family member drive you home.**

Recovery Timeline - At Home & Office Follow Up Visits

Congratulations! You have now begun your recovery period. Two of the most common questions we receive about joint replacements are: “How long is the recovery?” and “What is the recovery like?” We’ll explain this difficult subject in two ways. The first is a narrative summary below which is broken down in terms of critical time periods after surgery. The second is shown in a table form of similar data.

RECOVERY PERIOD - DAY 1 THROUGH 5

This period encompasses both your inpatient stay as well as the immediate days after being discharged home. In general, patients are surprised by how well they feel. Typically, the night of surgery is quite comfortable due to the residual effects of the spinal and/or regional anesthetic. Post-operative day #1 through day #5 are often the “roughest” days of your recovery because the anesthetic has completely worn off and you are reliant on oral and, rarely, intravenous medication. You will continue to receive a post-operative cocktail of medications to block multiple pathways of pain generated in your body including inflammatory and the thalamic, specifically Celebrex or Meloxicam (1 per day) and Tylenol (every 8 hours). You will be placed on 81mg of aspirin or another blood thinner based on your clot risk assessment. By blocking all pain pathways in parallel fashion we reduce the need for narcotics. This reduces the secondary effects of narcotics such as nausea, constipation, and mental confusion. **Swelling will develop during this period and may worsen for several days after surgery, typically peaking around 5 to 7 days after surgery.** Icing should be continued at least 15 to 20 minutes every hour with a thin towel between your skin and the ice to avoid freezing the skin.

You will have compression stockings and sequential compression boots or sleeves on to help reduce the risk of blood clots. The compression stockings help reduce swelling overall and should be used for 2 weeks post-operatively.

Our main goals during this timeframe are reducing swelling and engaging in early range of motion. Frequent small periods of range of motion are very valuable to maintain joint mobility but, more importantly, to reduce the risk of blood clots. Our recommendation is that you engage in regular ankle pumps and knee flexion while resting and icing your surgical area. We would request that once an hour you stand up and walk around for 5 minutes. While you are in the hospital this can be aided by the nurse and/or physical therapist. When you are at home, ambulation should be supervised by a family member or your caregiver until you feel stable. Please use your walker. We do not typically arrange for home therapy because patients are so mobile, and we have found that the therapist adds little value. However, this is very individualized so discuss this with your hospitalist and the physician assistant.

RECOVERY PERIOD - DAY 6 THROUGH 14

This is typically the timeframe when patients “start to feel better”. Swelling has generally peaked and now is subsiding. Pain levels should be generally decreasing as well. You will continue to take your oral anti-inflammatory (Celebrex or Meloxicam) and Tylenol, and as necessary, an oral narcotic for pain relief. Icing is perhaps the most valuable way to reduce pain. We have found that frozen peas or frozen corn wrapped in a thin towel is an inexpensive and moldable system to ice down your surgical area. We recommend you ice at least 15 minutes every hour around the clock (but you do not need to do this while you are trying to sleep).

For those who had a knee replacement, you will typically be starting outpatient physical therapy at this time. This appointment should have been preset with you before surgery was performed. This is another part of your pre-operative history and physical appointment. Typically you will be visiting the physical therapist 2 - 3 times a week. Goals are range of motion improvement, pain relief, muscle activation, and swelling reduction.

Recovery Timeline - At Home & Office Follow Up Visits - Continued

The support stockings or TED hose can be discontinued on day 14.

FIRST POST-OPERATIVE VISIT WITH DR. FONTES AND/OR MID-LEVEL ASSISTANT

Typically we will see you back for your first postoperative visit between 10 and 18 days after surgery. The principal goals of this evaluation are to do a wound inspection, check on swelling, and determine how your gait and mobility are progressing. If you come into the office, we will take an x-ray as well to confirm implant position. Our total knee patients will also have their range of motion assessed. We would like to see flexion of about 90° and the ability to nearly perfectly extend the knee. Wound closure is typically done with a layered absorbable suture under the skin and a superglue mesh on the skin itself, therefore, staple removal is rarely indicated or needed at this time. Lastly, we will update your activity profile and typically will allow you to start doing more activity for longer periods of time. The specific activities and limits will be very patient specific so we will go over your specific situation at this time.

RECOVERY PERIOD - DAY 15 THROUGH 30

This period is usually a time of major improvement in pain and swelling and function for our total hip and total knee patients. Many patients can return to light exercising at the gym. We still want to avoid straight leg raises and repetitive hip flexion activity (if you had a total hip) but you can certainly start riding a stationary bicycle, walking on a treadmill at a slow speed, and doing upper body exercises as you feel comfortable. Because our total knee patients are actively engaged in physical therapy, many do not feel the need to do additional exercising and this is fine. However, if you wish to do additional exercises please have your physical therapist give you guidance. Our only caution is to avoid over exercising at this point because your body needs rest too! Our avid golfers sometimes return to putting and chipping at this point, but we discourage taking full swings.

Our total hip patients at this point generally have minimal to moderate pain. A typical statement from our patients in this time frame would be, "It takes me about 5 - 10 steps to get going when I have been sitting for a while but then, once I am moving, I feel good." We call this "start-up pain" and the symptoms are typically due to residual inflammation in the hip capsule and hip flexor muscles. This will resolve with time. <u>It is for this reason that we do not want you to perform repetitive hip flexion and particularly straight leg raise exercises until all anterior (front) hip pain is gone.</u>

Our total knee patients will still have a fair amount of soreness in the knee and still have moderate swelling in most cases. These are both very normal. Our goals are mainly to reduce swelling and continue to improve range of motion while beginning to work on strengthening. The physical therapist will help supervise this and many PT exercises you can do at home as well.

A common question patients have is, "When can I drive?" Total hip arthroplasty patients typically drive about 1 to 2 weeks after surgery. They return to driving a little earlier if they have a left hip replacement than compared to a right hip replacement. Total knee replacement patients typically take longer. Many left knee replacement patients can return to driving between 2 and 6 weeks after surgery and most right knee replacement patients do not start driving until about 6 weeks. The major determinant of when you are ready to drive is when you can actively move the leg from the brake to the gas and vice-versa quickly and with good strength on the brake pedal. Feel free to test your ability to perform these movements in your car in the garage with the engine off. Note: Do not flood your engine!

Recovery Timeline - At Home & Office Follow Up Visits - Continued

RECOVERY PERIOD - DAY 31 THROUGH 60

Most of our patients are now feeling quite good. Our hip replacement patients are using little to no ambulatory aids such as a cane or crutch. This is also true for a total knee replacement patients. Most hip replacement patients will have very little pain except they may continue to have that "start-up pain" when they first stand after sitting for a while. This should continue to improve and for most patients, it is gone by 3 months after surgery. Our hip replacement patients can start hitting golf balls at this point and engage in most activities at the gym except running or impact sports. Almost everyone is back to work as well unless they have a heavy physical job.

Our knee replacement patients continue to do some physical therapy at this point in most cases. Range of motion should be at least 90° of flexion and you should be able to get the knee nearly straight or completely straight. Swelling may still be present but should be improving. Most patients complain of a little bit of aching but overall their pain level is much lower than it was before surgery. Active strengthening is now an important part of physical therapy. It is now okay at this time to submerge the knee or hip in chlorinated water such as a swimming pool, but we generally discourage lake swimming until 6 weeks to 8 weeks after surgery. The wound should be absolutely sealed and skin looking pristine before submerging in lake or ocean water.

You will come in for your second postoperative visit around 6 weeks after surgery. If your first post-operative visit was done through video teleconference, your second visit will be in the office. On the other hand, if your first visit was in the office, your second visit will typically be via video telemedicine conference. Of course, you can always come into the office if you prefer direct evaluation with Dr. Fontes or the mid-level assistant.

RECOVERY PERIOD - DAY 61 THROUGH ONE YEAR

Most studies have shown that hip replacements can take between 3 and 6 months to fully recover from the replacement and knee replacements may take as long as 13 months to plateau in the recovery. In general, both groups of patients continue to have increased functional use of the limb with decreasing soreness with activity. Ultimately, we hope to get you to a point where you rarely think about your joint on a daily basis. This is what we call the "forgotten joint" and this is our ideal situation. Hip replacement patients will get to this "forgotten joint" phase frequently - probably over 90% of the time. Total knee replacement patients get to this phase about 50% of the time and this is mostly due to the fact that the knee replacement implants typically make small noises or have other minor manifestations which remind you that you have an artificial joint. However, both groups of patients remain very satisfied with joint replacements and, in our hands, 99% of patients say they would have the operation again.

We will typically see total knee arthroplasty patients back 3 months after surgery to verify that their motion has returned satisfactorily, and their strength is where we want it. Physical therapy is typically completed at this time and self-directed exercises are all that is needed.

Many, if not most, total hip arthroplasty patients do not need to come in for 3-month visit. We sometimes will see someone back if they are still struggling.

We do ask all patients to come in for a 1-year anniversary visit which will include an x-ray and then assessment of your function. This is a good time to remind you that you will need to come in every 5 years regardless of symptoms for an x-ray make sure that the implant remains in good health.

Recovery Milestones and Other Important Information

ACTIVITY	APPROXIMATE TIMEFRAME
Walking	Day 0
Getting out of a chair	Day 0
Stairs	Day 1
Sleeping in a regular bed	Day 1
Showering	Day 1
Walking the dog	Days 1 - 14
No longer needing narcotics	Days 1 - 21
Pain less than before surgery	Days 1 - 21
Return to work	Days 7 - 42 (depending on work demands)
Driving	Weeks 1 - 4
Return to sexual activity	Weeks 2 - 6
Playing golf	Weeks 4 - 12
Playing tennis	Weeks 12 - 30
Complete formal physical therapy	Weeks 8 - 12 (Total Knee Arthroplasty only)
Stiffness resolved	Months 6 - 12

OTHER IMPORTANT COMPONENTS OF YOUR POST-OPERATIVE RECOVERY

- Anticoagulation (prevention of clotting) is extremely important after total joint replacement. The most important thing you can do to prevent blood clot is to move regularly after surgery. This involves pumping the ankles, moving the knees, and getting up every hour and walking for at least 5 minutes. Low risk patients are given aspirin twice a day and high-risk patients are given either an injection or oral prescription for more aggressive blood thinning. You will take a blood thinner or aspirin for 30 to 35 days after surgery

- Coughing and deep breathing are also important to keep your lungs open. In the hospital you will be given a spirometer to help you take deep breaths. This exercise should be continued post-operatively.

- Constipation often occurs after surgery. This is due to a combination of narcotic pain medication, changes in diet, and lack of activity. It is important that you drink lots of water and other fluids such as prune juice to prevent constipation. An over-the-counter stool softener such as Colace is a good idea in the immediate post-operative period. If you have not had a bowel movement by your second or third day after surgery, please let our nurse know.

When to Call Your Doctor / When to Call 911

Once you are home, it is not uncommon to wonder what is normal and what isn't as it relates to your recovery and healing after a joint replacement. As with any surgery, there will be a certain amount of discomfort, swelling, etc. in and around the surgical site. However, and while this is rare, there are some situations where seeking medical help is necessary. Please refer to the section below if one or more of these symptoms arise once you are home.

WHEN TO CALL DR. FONTES / TEAM FONTES AT (702) 498-0212

- If you have a fever above 101°
- Uncontrolled shaking or chills
- Increased redness, heat, drainage around the incision
- Increased pain no significant decrease in motion during activity or at rest
- Increased swelling, pain or tenderness in the thigh, calf, ankle or foot
- Abnormal bleeding of any kind

WHEN TO CALL EMERGENCY MEDICAL SERVICES / 911

- Difficulty breathing or shortness of breath
- Chest pain
- Localized chest pain with coughing or taking a deep breath

Nutrition After Surgery

Calorie and protein needs are greater after your surgical procedure. It is recommended that you aim for 3 meals a day and snacks as tolerated. Also aim to include 1 - 2 protein sources at each meal. This will help ensure that you are consuming adequate protein and calories for healing. **Protein is the building block to healing. Try to include 1 - 2 sources at each meal or at snack time.**

Protein Sources

- 3-4 ounces of Beef
- Poultry
- Eggs
- Fish

Vegetarian Protein Sources

- Soy
- Beans
- Tofu
- Nuts
- Seeds
- Peanut Butter

Dairy Protein Sources

- Milk
- Yogurt
- Cheese

Iron Needs

The smallest amount of blood loss during surgery can deplete your iron levels. Iron is needed to help carry oxygen throughout your body. If your iron is low, you may feel dizzy, get headaches, not be able to sleep and feel somewhat irritable. Iron is best absorbed if you take your iron supplement or eat iron rich foods with foods that are high in Vitamin C. Below is a list of high iron foods that you can consume to improve your levels.

- Organ meat, like liver
- Oysters, clams, scallops, shrimp
- Lean beef, pork, lamb
- Chicken, turkey
- Dried apricots, dried peaches, prunes, raisins
- Legumes, dried beans
- Whole grain and enriched breads
- Wheat germ
- Fortified breakfast cereals
- Prune juice
- Dark green leafy vegetables
- Egg (yolk)
- Dark molasses

Nutrition After Surgery - Continued

Vitamin C Rich Foods Include:

- Citrus juices
- Oranges, limes, lemons
- Cantaloupe, papaya
- Strawberries, kiwi
- Broccoli, cauliflower, Brussel sprouts
- Potato, tomato
- Spinach and other greens
- Sweet peppers, chili peppers

IMPORTANT INFORMATION

Medication

- Take all medication as prescribed by your doctor. You may need to take your anticoagulation medication for about one month after discharge.
- Some people are discharged home with a prescription for injections to prevent blood clots. It is important that you or a family member learn how to perform these injections prior to leaving the hospital. Home care will not come to your house every day for every dose. You must learn how to perform these injections.
- Remind your physician of any medications you were on before your surgery, that were not prescribed for you after your surgery.
- Remember to check with your physician before you begin taking any over the counter medications or herbals.

Activity

Please follow the exercise plan that your doctor and physical therapist have established for you. Your recovery process and continued health depends on good nutrition, rest and proper exercise.

Patient Informed Consent Form

Please bring a signed copy of this form to your pre-operative History and Physical appointment.

	Initials
I do not have a history of metal allergy or react to metal jewelry	________
I do not have a history of blood clot/DVT or pulmonary embolism	________
I have arranged to have someone at home with me for five (5) days after surgery	________
I do not take or have stopped taking immune suppressing drugs four (4) weeks prior to surgery	________
I do not take blood thinners or have transitioned to short acting medication before surgery	________

I understand that the following risks are RARE but associated with joint replacement:

- Infection ________
- Blood loss ________
- Wound healing complications ________
- Numbness around the incision ________
- Swelling ________
- Blood clot/Pulmonary Embolism (PE) ________
- Death ________
- Leg length inequality ________
- Loss of motion ________
- Fracture ________
- Major nerve or vessel injury ________
- Dislocation ________
- Need for future surgery ________
- Significant tear of a muscle or tendon requiring surgery ________

PROCEDURE:

____

____

____

____

PATIENT SIGNATURE: ______________________________ **DATE:** ______________

Medication List

Name ______________________________ Date of Birth ____________________

Name of Medication	Dosage - (MG)	Reason for Medication	Date to Stop Taking
(example) Lisinopril	20/25 Tab	Hypertension	
(example) Flexeril	10mg	Muscle spasms/pain	

Are you allergic to any medication? (Circle) **YES** **NO**

If yes, to what? ______________________________

What was the reaction your had to each of the above? ______________________________

____

Are you allergic to metal, cheap jewlry or nickel? (Circle) **YES** **NO**

If yes, to what? ______________________________

Have you ever had an adverse reaction to anesthesia? (Circle) **YES** **NO**

If yes, what type of a reaction did you have? ______________________________

Have you ever had a blood clot or DVT or pulmonary embolism? (Circle) **YES** **NO**

Are you aware of any family member with a history of DVT or pulmonary embolism, or clotting disorder? (Circle) **YES** **NO**

Do you have sleep apnea? (Circle) **YES** **NO**

Total Joint Replacement Quiz

Which type of anesthesia has shown to reduce post-operative pain and lead to faster mobility after surgery?

____

What is the total time a typical family will be waiting from the time you head into the operating theater to when they can see you on the floor?

____

Smoking has been shown to increase the risk of wound healing problems. TRUE FALSE

When should you make your appointment for post-operative physical therapy?

____

When should you get your prescriptions filled for post-operative medications?

____

It is acceptable to pre-register at the hospital over the phone rather than going in person. TRUE FALSE

What should you do if there is a discrepancy between what the hospital and what our team is telling you regarding your arrival time at the hospital?

____

How long is the typical stay in the hospital after joint replacement?

____

Almost no one needs to go to acute inpatient rehabilitation after joint replacement. TRUE FALSE

How long will you take a blood thinner after total joint arthroplasty?

____

How long should you delay elective dental procedures after surgery?

____

How long should you wear your compression stockings after surgery?

____

Total Joint Replacement Quiz - Continued

When should you remove the surgical dressing that was put on during surgery?

What is the cell phone number for Team Fontes?

What must be performed before surgery can be scheduled?

Swelling is rare and a sign that something is “wrong”. TRUE FALSE

When can you submerge the wound in water and start swimming after joint replacement?

Frequently Asked Questions - General

How long is the surgery?
Typically, a hip or knee arthroplasty surgical time is between 1 and 2 hours. Surgeons call this the "skin-to-skin time," which is the time from skin incision to the time of skin closure and dressing application. But, it is important to note that the total time in the operating room may be 1 to 2 hours longer than this because of the additional time needed to start general anesthesia or perform a spinal anesthetic, position the patient carefully on the operating table, take intraoperative x-rays if necessary, verify and confirm the surgical site and surgical procedure one additional time, and prep and drape the patient sterilely. Because of this additional time in the operating theater, it is best to think of the surgical time as 3 to 5 hours. This is also helpful information to share with family or friends who are at the hospital with you so they can understand the length of time they will wait before they will hear from Dr. Fontes after surgery.

What type of anesthesia is used?
Multiple studies have shown the advantages of spinal anesthetic and regional blocks for patients undergoing total hip and total knee arthroplasty. Improved outcomes and faster recovery are seen in patients who can avoid inhaled gas anesthetics and intubation with less nausea and grogginess. New evidence suggests that inhaled/gas anesthesia causes short- and medium-term brain dysfunction. Many patients are fearful that they will "be awake during surgery" if we avoid gas anesthetic. This is definitely not the case. Intravenous general anesthesia (Propofol – the same drug used during colonoscopies) is always administered in addition to spinal anesthesia or peripheral blocks so that the patient is completely unaware of the procedure. In other words, you will be asleep. The principal advantage of spinal anesthesia or regional blocks is that the general anesthesia does not need to be quite as deep or extensive and therefore a breathing tube is not required. The other major advantage of regional anesthesia or spinal block is lingering postoperative pain reduction which reduces the need for narcotics and other pain medications.

How long will I be in the hospital?
Many joint replacements are now done at a surgery center and the patients go home after surgery. In fact, Medicare now allows total knee arthroplasties and total hip replacements to be performed at surgery centers if the patient is healthy enough for surgery as an outpatient. Select Medicare patients and younger patients without medical comorbidities (additional health issues) who have had their surgery at a surgery center or hospital will go home the same day. Patients with comorbidities will spend 1-2 nights in the hospital. The length of stay is determined by several factors including pain, mobility, physical therapy goals and achievements, and requirements for home discharge.

My bedroom is upstairs, can I climb stairs after a hip or knee replacement?
Most patients are able to successfully negotiate stairs the day of discharge. In fact, the therapist will practice with you on stairs at the hospital prior to your discharge. You may find it helpful to minimize the trips up and down the stairs for the first 1 to 2 weeks. However, it should not be necessary to move your bedroom downstairs.

When can I return to sexual activity?
Typically 2 to 6 weeks.

When can I drive after my hip or knee replacement?
Most patients can drive safely 1 - 2 weeks after a **left** hip or knee replacement. Patients with **right-sided** replacements may take an additional 2 to 4 weeks. The ability to drive is determined by your ability to use the right leg for the gas and brake pedals. I encourage patients to test themselves after surgery by moving from brake to gas and vice versa in their parked car to determine when they can drive.

Frequently Asked Questions - General Continued

Are there any activities I cannot do after a hip or knee replacement?
Most arthroplasty surgeons feel that their joint replacement patients should not be jogging or running on a routine basis. The concern with this type of activity is that it can potentially cause loosening of the components, fracture of the plastic bearing, or premature wear. Another concern is debonding of the interface between the implant and cement when that is used. We discourage our own patients from running as an exclusive exercise, but it is acceptable to run as part of a CrossFit program or other more general exercise program. Golfing, tennis, racquetball, CrossFit, bicycling, rock-climbing, yoga, Pilates, and general gym workouts are all acceptable. Just be aware that an artificial joint is like a 50,000-mile tire, you can decide to use those miles as quickly or slowly as you desire.

What is the chance of an infection after a hip or knee replacement?
Most large database reviews show that the risk of deep infection runs between 0.5% and 1.2%. Deep infections are classified as infections that tract down to the implant and require surgical washout or surgical removal of the implant in order to cure the infection. Infection is the most devastating complication of joint replacement. Numerous methods are used to reduce infection risk in our practice including: pre-operative dental screening, smoking cessation, antibiotics intravenously, antibiotics in the wound, two different types of antibiotic irrigation of the wound during surgery, the utilization of isolation space suits during surgery, meticulous surgical technique, and silver impregnated post-operative dressings.

Can I have both sides replaced at the same time?
It is possible to have both hips or both knees replaced at the same time but, in general, we discourage patients from doing so. There is no doubt that the risk of blood loss and blood transfusion is much higher with bilateral replacements. Some studies have shown there may be a slightly higher risk of infection because of this and the prolonged surgical time. Nevertheless, we have had patients that, after careful consideration of the risks and benefits, have safely had bilateral replacements. It can be particularly attractive for younger patients who want to minimize time off of work.

Do I need to take antibiotics before dental procedures after a hip or knee replacement?
We currently suggest that our patients use prophylactic antibiotics for 1 year after surgery when having a dental procedure or other contaminated type of procedure such as oral surgery. We will provide this antibiotic to you if you call us before your dental procedure. Some dentists require that we sign paperwork allowing them to proceed with dental procedures after joint replacement surgery. We will be happy to do this if you provide us the paperwork.

Do you use staples in the skin?
Generally speaking, we perform a layered closure of the deep tissue and skin that uses absorbable suture without staples. In fact, for most patients, the skin is super glued closed with a closure called Dermabond Prineo. The picture in the addendum shows a typical wound closure using this material. You can se a thin layer of mesh on the skin which is super-glued onto the skin to help reinforce the wound closure.

Can I keep the bone you cut out?
No.

Frequently Asked Questions - General Continued

Why does it take so long to get on the surgical schedule?
There are several factors that determine timing to get on the surgical schedule. Usually the longest factor is getting all the preoperative testing and medical clearances completed before surgery. The number of tests and number of doctor visits vary depending on the number and availability of specialists necessary to obtain clearance. Most patients should be able to have surgery within 6 weeks after we make the decision for surgery.

How many hip and knee replacements do you do in a year?
Dr. Fontes performs approximately 300 total hip and total knee procedures per year.

Will I need to give blood before surgery?
Several years ago giving pre-operative blood was a routine practice in orthopedics before joint replacement. This practice has now been abandoned for several reasons. First, and foremost, blood transfusions are almost never needed (less than 5%) after total hip or total knee arthroplasty. This is due to several factors including utilizing minimally invasive surgery, regional and spinal anesthetics, and the intraoperative use of the drug tranexamic acid (TXA). Tranexamic acid is a medication that has proven very safe and very effective at reducing intraoperative and postoperative blood loss. Most importantly, it does this without increasing the risk of blood clots. Second, insurance companies do not pay for self-directed autologous blood collection and storage. This cost can be prohibitive, and most patients do not want to pay for it, particularly if the chance of needing their own blood back is less than 5%. Third, giving blood pre-operatively increases the risk that you will need a blood transfusion after surgery. Fourth, the screening tests have become so sensitive and accurate that the blood supply is universally safe. You can therefore feel very secure that, in the rare case you need a blood transfusion, the blood you will receive is safe.

Will I get a blood transfusion after surgery?
The risk for blood transfusion is extremely low after joint replacement. Currently the need for transfusion runs less than 3%.

Will I go home or to inpatient rehabilitation after surgery?
It is our expectation that almost every one of our patients will be able to be safely discharged directly home after their joint replacement. There is ample and compelling evidence that indicates that patients who are discharged to an inpatient rehabilitation facility such as HealthSouth (now Encompass health) or other inpatient facilities have a higher risk of complications such as infection, pneumonia, and blood clots. We have been very successful in implementing preoperative, intraoperative, and postoperative protocols which allows patients to be discharged home in almost every case. This is achieved by using a combination of optimized surgical treatment, optimized pain control with multimodal pain medication, and optimized physical therapy in the hospital setting. In fact, most patients do so well that home health care and nursing and physical therapy are not required either. Nevertheless, there are incidences where patients will benefit from home health care and occasionally inpatient therapy and we do utilize this if necessary.

When can I work out after a hip or knee replacement?
We encourage patients to get back in the gym as soon as they feel comfortable. Certainly upper extremity exercises can be performed within days of surgery. Very low resistance leg exercises such as spinning on a stationary bicycle or light leg presses can be performed around 2 to 4 weeks after surgery. As with everything after joint replacement, symptoms dictate activity. We have many patients that have controlled pain and good strength 4 - 6 weeks after surgery, and we allow them to progressively increase their demands and exercises. Our only caution is to “listen to your body” and avoid

Frequently Asked Questions - General Continued

causing pain. A recovering joint replacement needs activity and rest in appropriate measure and some patients tend to overdo exercising and under do resting. Over-achieving in the early post-operative period will usually just set you further behind in your recovery.

When can I golf after a hip or knee replacement?
Because recovery after joint replacement is so variable it is difficult to define this until we assess your recovery progress post surgery. However, many of our "golf addicts" are ready to start chipping and putting at around 4 to 6 weeks after surgery. Full swings off of a tee are allowed once the patient is essentially pain-free and has a normal gait. Regular golf games can follow shortly thereafter. Keep in mind that golf places significant forces on the hip or knee implant so we really want you feeling at least 90% recovered before you start taking full swings.

When are my post-operative appointments after a hip or knee replacement?
Approximately 2 weeks after surgery, 6 weeks after surgery, 12 weeks after surgery, and 52 weeks after surgery. We are currently developing protocols in which some of these visits can be performed via telemedicine and save you a visit to the office.

Who will be caring for me during and after my hip or knee replacement?
The team we have assembled is critical to your success. It begins with your visit with our physician assistant who will do your pre-operative history and physical. This visit will entail a careful physical examination as well as a review of your preoperative clearance letters and labs. It is an opportunity to go over any last-minute questions you may have after reading all the information we have provided to you. When you arrive at the hospital the day of your surgery you will meet the intake nurse. Their job is to get you prepared for surgery including starting an IV and a skin prep and shave if necessary. Next you will meet the intraoperative nurse as well as the anesthesiologist. We also frequently work with a certified nurse anesthetist who are particularly skilled at blocks and spinals. When you are in the OR you may meet the surgical tech who is responsible for handing instrumentation to the surgeon. When your surgery is complete you will see the recovery room nurse who will handle your care in the PACU. Typically you will spend an hour in the post-operative recovery area. On the orthopedic floor you will meet the floor nurse and soon thereafter the physical therapist. Physical therapy typically starts within 1 or 2 hours of arrival on the floor. In addition, you will meet the hospitalist who is an internal medicine specialist who will follow you to keep you medically safe and will handle most of the administrative issues of a hospitalization. Your discharge timing will be determined by your pain levels, the opinion of your mobility from the physical therapist, and the hospitalist's opinion of your medical condition. One of our PA's will see you in the hospital on postoperative day #1 and #2 and/or #3 (if necessary) and then you will be discharged home.

Will I need home health after a hip or knee replacement?
We have found that home health care adds very little to the recovery process for our patients. In fact, many of our patients complained about waiting around the house for the therapist to show up when we used home therapy years ago. Occasionally, we will have a patient who we feel would benefit from home therapy and we will use it if necessary.

Frequently Asked Questions - Total KNEE Replacement

What is the knee implant made of?
Most modern total knee joint implants are made of a combination of titanium alloy, cobalt chromium, and ultrahigh molecular weight cross-linked polyethylene.

What brand of knee implant do you use?
The manufacturer that we use is Stryker and the model is the Triathlon total knee arthroplasty. One advantage of this implant is that it has a very good non-cemented option for people who have adequate bone quality for a non-cemented device.

How long will my knee implant last?
The longevity of an arthroplasty implant is determined by several factors. One method we use for tracking implant survivorship is a curve in which we plot percent of implants still in place (y-axis) over time (x-axis). What this graph shows is that in the first 1 to 2 years after implantation, 1-3% of implants are revised. Most of these early revisions are for infection, pain, stiffness and technical surgical issues such as fracture or misplacement of implants. In my personal experience of hundreds of total knee patients, we have revised less than 1% of knee replacements over the last 15 years. The second part of this curve shows that, once we get past the early "failures", the curve flattens out indicating almost no revisions over the next 15 years. This indicates that the implants are showing no signs of "wearing out". This clinical data corresponds to laboratory data which indicates that modern knee replacements should last at least 20 years.

What is the recovery time after a knee replacement?
This is perhaps the most common and most vexing question to answer about knee replacement. We will summarize our experience by saying that most patients at 2 weeks have moderate pain but are improving. Almost everyone is still using a walker or at least a cane for their 2 - week checkup. Physical therapy is principally working on range of motion, swelling reduction, and early muscle activation. At 6 weeks, most patients ambulate without an aid but bring a cane with them when they are out of the house. Pain is greatly improved at this point. Most complain of stiffness and there is still moderate residual swelling at this point. Physical therapy is typically now working on strengthening as well as range of motion work. Nearly 100% of patients at 3 months are back to work. Most patients at this point report little to no pain just mild stiffness. Studies show that it takes a typical patient 12 to 13 months to fully recover from a knee replacement with stiffness and strength being the slowest symptoms to plateau.

Do you use glue or cement with a knee replacement?
In short, it depends. Total knee arthroplasties have traditionally been performed cemented. There have been a few non-cemented implants on the market over the years. Recent progress in the technology of implant production has allowed significant improvements in non-cemented total knee arthroplasty implants. The implant we use has an option for cemented or uncemented use. We believe uncemented is advantageous for heavier patients who are younger. We use cemented implants for patients who have rheumatoid arthritis, poor bone, or are older. Most everyone else gets uncemented total knee arthroplasties. Otherwise the shape of the implants (cemented vs. non-cemented) are exactly identical.

How big is the knee incision?
This typically varies between 6 and 10 inches. It tends to be larger for men, patients who have larger implants, revisions of any kind, and for patients that are of larger stature and/or who are obese.

Frequently Asked Questions - Total KNEE Replacement Continued

Can I have my joint replacement at a surgery center and avoid the hospital?

Yes, but it depends on several factors. Dr. Fontes helped develop the second outpatient joint replacement center in Southern Nevada and is a huge proponent of outpatient joint replacement in the right patient. In addition, Desert Orthopaedic Center has its own surgery center, the Institute for Orthopedic Surgery (IOS) where Dr. Fontes performs some joint replacement surgeries. Most private insurances and Medicare now allow total knee arthroplasty to be performed at a surgery center. Centers around the United States are now performing between 30% and 90% of joint replacements on an outpatient basis. We are moving in this direction as well. The most critical factors are overall medical condition of the patient and the presence of a strong support system at home. We have developed and utilized screening tools which allow us to predict which patients are excellent candidates for outpatient joint replacement. Dr. Fontes has performed over 400 outpatient hip and knee replacements safely at the surgery center.

Will I need outpatient therapy after a knee replacement?

We use outpatient physical therapy for all our total knee arthroplasty patients. We strive to get your first post-operative physical therapy visit scheduled before your surgery is performed. Typically this visit will be on Friday 3 days after your surgery or Monday 5 days after your surgery. Physical therapy is typically 3 times a week for the first several weeks and may then taper off to twice a week until you complete physical therapy. A typical total knee arthroplasty patient attends physical therapy for 6 to 8 weeks.

Frequently Asked Questions - Total HIP Replacement

What is the hip implant made of?
Most modern joint replacements are made of a combination of titanium alloy, cobalt chromium, ceramic, and ultra-high molecular weight cross-linked polyethylene. The total hip arthroplasty we use is manufactured by the company Smith & Nephew. The femoral component or stem is manufactured of titanium alloy. We use a ceramic head in every case. There will be no cobalt or chromium in your implant. The acetabular component (or hip cup) is also made of titanium alloy, and a modular liner of ultrahigh molecular weight cross-linked polyethylene is placed inside the titanium acetabular component. Thus, the bearing surface is ceramic on polyethylene.

What brand of hip implant do you use?
The manufactuer we use is Smith & Nephew. The femoral stem is the Anthology model typically with about 10% of patients requiring a Polar stem. Both implants are available during surgery. We choose one or the other depending on various factors such as bone quality, bone shape, and patient's age. The acetabular component is also Smith & Nephew and is the R3 model.

How long will my hip implant last?
The longevity of an arthroplasty implant is determined by several factors. One method we use for tracking implant survivorship is a curve in which we plot percent of implants still in place (y-axis) over time (x-axis) - see graph in addendum. What this graph shows is that in the first 1 to 2 years after implantation, 1-3% of implants are revised. Most of these early revisions are for infection, dislocation, and technical surgical issues such as fracture or misplacement of implants. In Dr. Fontes' personal experience of over 2,000 total hip patients, he has revised less than 1% of hip replacements over the last 10 years. The second part of this curve shows that, once we get past the early "failures", the curve flattens out indicating almost no revisions over the next 15 years. This indicates that the implants are showing no signs of "wearing out". This clinical data corresponds to laboratory data which indicates that modern hip replacements (with a ceramic femoral head and a cross-linked polyethylene bearing surface in the acetabulum) should last at least 30 years.

What is the chance of dislocation after a hip replacement?
Dr. Fontes has seen only 4 cases (out of 2,000 cases) of dislocation in his direct anterior hip replacement patients. Three occurred in the first 3 weeks; one patient was doing yoga, another patient rolled over in bed the night of surgery, the third was doing physical therapy, and the fourth was doing the splits seven months after surgery.

What is the recovery time after a hip replacement?
This is perhaps the most common and most difficult question to answer about hip replacement. We will summarize our experience by saying that most patients at 2 weeks have less pain than they did before surgery. At 6 weeks, most patients ambulate without an aid, are driving, and are back at work with minimal pain just "stiffness." 90% of patients at 3 months after surgery are symptom-free.

Do you use glue or cement with a hip replacement?
In short, almost never. 99% of our hip replacements in the past 8 years use what is called "in-growth" technology. Essentially, the surface of the implant is rough and encourages bone growth onto and into the implant thus directly bonding the implant to the bone. However, there are patients who have very poor bone quality or have other technical issues that make a cemented femoral implant more desirable.

Frequently Asked Questions - Total HIP Replacement Continued

How big is the hip incision?
This typically varies between 4 and 6 inches. It tends to be larger for men, patients who have larger implants, revisions of any kind, and for patients that are of larger stature and/or who are obese.

Can I have my hip replacement at a surgery center and avoid the hospital?
Yes, but it depends on several factors. Dr. Fontes helped develop the second outpatient joint replacement center in Southern Nevada and is a huge proponent of outpatient joint replacement in the right patient. In addition, Desert Orthopaedic Center has its own surgery center, the Institute for Orthopedic Surgery (IOS) where Dr. Fontes performs some joint replacement surgeries. Most private insurances and Medicare now allow total knee arthroplasty to be performed at a surgery center. Centers around the United States are now performing between 30% and 90% of joint replacements on an outpatient basis. We are moving in this direction as well. The most critical factors are overall medical condition of the patient and the presence of a strong support system at home. We have developed and utilized screening tools which allow us to predict which patients are excellent candidates for outpatient joint replacement. Dr. Fontes has performed over 400 outpatient hip and knee replacements safely at the surgery center.

When can I return to yoga or Pilates after a hip replacement?
One of our two dislocations occurred in someone who was feeling normal/pain free 3 weeks after surgery and engaged in a yoga class and dislocated her hip when her yoga instructor pushed on her hip. Now, in an abundance of caution, we recommended that all stretching activities such as Pilates or yoga be avoided until 3 months after surgery. This allows the ligamentous structures to fully heal after hip replacement.

Will I need outpatient therapy after a hip replacement?
Most direct anterior hip surgeons have transitioned away from outpatient therapy postoperatively. A variety of factors led to this change. First, we found that our patient simply did not need the therapy. Second, there was a troubling few percent of patients who we felt were made worse with therapy. Some of this is due to an inexperienced therapist doing the “wrong” exercises after an anterior hip replacement but most of it is simply overusing the tissues around the hip. For example, exercising the anterior musculature can cause dramatic soreness with no real long-term value. Our general workflow is to not use outpatient physical therapy unless the patient is struggling to regain strength or a normal gait after 6 weeks. Occasionally, we have a patient who insists on going to physical therapy immediately after surgery and we certainly will not overrule them. But, more often than not, these patients come back more sore and less functional than patients who didn’t do physical therapy at all.

When can I sleep on my side? Can I cross my legs?
One of the principal advantages of a direct anterior hip replacement is stability which allows you to sleep on your side or stomach immediately. It is OK to cross one leg over the other, but you should not place the foot on the side of your surgery on the knee of the other leg for 6 weeks.

What is a Physician Assistant (PA)?

Dr. Fontes utilizes physician assistants as part of his provider care team. A physician assistant is a provider who has completed their undergraduate degree, focusing their studies in the sciences, and then attended a 2 to 3-year post-graduate physician assistant program. Prior to being accepted into PA school, most programs require that the applicant has worked one to three years in a clinical environment, including but not limited to, as an ER technician, medical assistant, or physical therapy aide. Getting into PA school is competitive, and the education is grueling. Physician assistants are trained in all aspects of medicine and can choose to "specialize" after they have completed their program, which is done predominantly in the form of on-the-job learning.

As physician assistants practicing in orthopedics, PAs work as members of a physician-led team, providing medical care under the supervision of the orthopedic surgeon, Dr. Fontes. The surgeon maintains a high level of involvement and supervision throughout. PAs perform exams, interpret diagnostic tests such as X-rays, MRIs, bone scans, and laboratory studies, and make treatment plans in strict coordination with Dr. Fontes for our patients. When in doubt, Dr. Fontes is always available and eager to assist or guide in treatment. PAs are able to prescribe medications and perform all pre-operative visits, as well as most post-operative visits. This facilitates freeing up Dr. Fontes' time to see new patients and patients who need more attention in our outpatient clinic.

Physician assistants also first-assist in surgery with Dr. Fontes. Another key role PAs play is rounding on patients in the hospital after surgery and coordinating care with the hospitalist physician. It is truly a team effort, and one that PAs have found to be extremely effective.

What is the Role of a Physician Assistant in Orthopedics?

In the field of orthopedics, PAs play a crucial role, operating both autonomously and in collaboration with orthopedic surgeons. With their extensive medical training, PAs are equipped to evaluate patients, diagnose musculoskeletal conditions, order and interpret diagnostic tests like X-rays or MRIs, and even provide therapeutic interventions. They can treat a wide variety of orthopedic concerns, from acute injuries such as fractures or sprains to more chronic conditions like degenerative disc disease. Furthermore, PAs are trained to perform various procedures, including casting, splinting, joint injections, and aspirations. In a surgical scenario, PAs often assist orthopedic surgeons during the operation and play an essential role in pre-operative evaluations and post-operative care. Their ability to conduct follow-up visits, monitor patient recovery, adjust medications, and liaise with physical therapists ensures patients receive thorough and streamlined care. This versatility makes PAs indispensable in the orthopedic setting, bridging the gap between surgeons and patients, and ensuring the continuity of care.

What is a Nurse Practitioner (NP)?

A nurse practitioner (NP) is an advanced practice registered nurse (APRN) who has completed specialized education and clinical training beyond that of a registered nurse (RN). The educational journey to become an NP typically begins with obtaining a Bachelor of Science in Nursing (BSN) degree, although there are bridge programs for those who start with an associate degree in nursing. After acquiring their BSN, aspiring NPs must pass the NCLEX-RN exam to become licensed RNs. Following a few years of nursing experience, they then proceed to a graduate program to earn a Master's of Science in Nursing (MSN) or a Doctor of Nursing Practice (DNP) degree. During this advanced education, students focus on a particular specialty, such as family care, pediatrics, or geriatrics. The program encompasses both rigorous coursework and extensive clinical experience. Upon completion, candidates must pass a national certification exam specific to their chosen specialty to practice as an NP.

What is the Role of a Nurse Practitioner in Orthopedics?

In orthopedics, NPs play an instrumental role, functioning both independently and in collaboration with orthopedic surgeons. Their comprehensive training allows them to conduct physical examinations, diagnose musculoskeletal conditions, interpret imaging studies, and formulate treatment plans. They can manage various orthopedic issues, ranging from acute injuries like fractures and sprains to chronic conditions such as osteoarthritis. NPs in this specialty are skilled in performing joint injections, managing post-operative patients, and prescribing necessary medications, including pain management strategies. They are often involved in patient education, explaining surgical procedures, rehabilitation protocols, and preventative measures to enhance musculoskeletal health. In surgical settings, orthopedic NPs can assist surgeons during procedures and play a pivotal role in pre-operative preparations and post-operative care, ensuring a holistic approach to patient recovery. Their advanced clinical skills combined with a nursing perspective make NPs invaluable assets in the orthopedic care team, ensuring patients receive comprehensive and compassionate care.

Outpatient Joint Replacement in a Hospital Setting

Outpatient joint replacement, also known as same-day or ambulatory joint replacement, refers to a surgical procedure where the patient is discharged on the same day of their surgery, without an overnight stay in the hospital. With advancements in surgical techniques, anesthesia protocols, and pain management, certain joint replacement procedures that were once strictly inpatient can now be safely performed on an outpatient basis. This includes replacements of the hip, knee, and shoulder joints.

For many patients, outpatient joint replacement can offer several advantages over the traditional inpatient approach. These benefits often include reduced hospital-associated costs, a quicker return to the comfort of one's home, decreased risk of hospital-acquired infections, and a streamlined recovery process. Moreover, advances in minimally invasive techniques and regional anesthesia have made these procedures less traumatic, thereby enabling faster recovery times and reduced postoperative pain.

However, outpatient joint replacement isn't suitable for everyone. Patient selection criteria are crucial in ensuring the safety and success of the procedure. Typically, ideal candidates are those who are in good overall health without significant medical comorbidities. They should have a strong support system at home, ensuring they can manage post-operative care and emergencies if they arise. Patients should be of a lower risk for surgical complications and possess a high motivation for rehabilitation. Age may be a consideration, but physical health and wellness often take precedence over age alone. On the other hand, those with complex medical histories, significant heart or lung issues, or lacking home support may be better suited for the traditional inpatient approach. Pre-operative evaluations, including physical assessments and discussions of medical history, are vital to determine a patient's suitability for outpatient joint replacement.

I generally perform total joint arthroplasty in hospitals for patients who might need an overnight stay due to certain medical conditions or if the surgical procedure is complex. The primary factor influencing whether a patient goes home the same day or stays overnight is their personal preference and comfort level. We will identify patients who are interested in going home the same day BEFORE the date of surgery- either on the day the surgery is scheduled or the pre-operative visit with the midlevel. If a patient expresses a desire to return home on the day of the surgery, we can perform the procedure either at an outpatient center or a hospital.

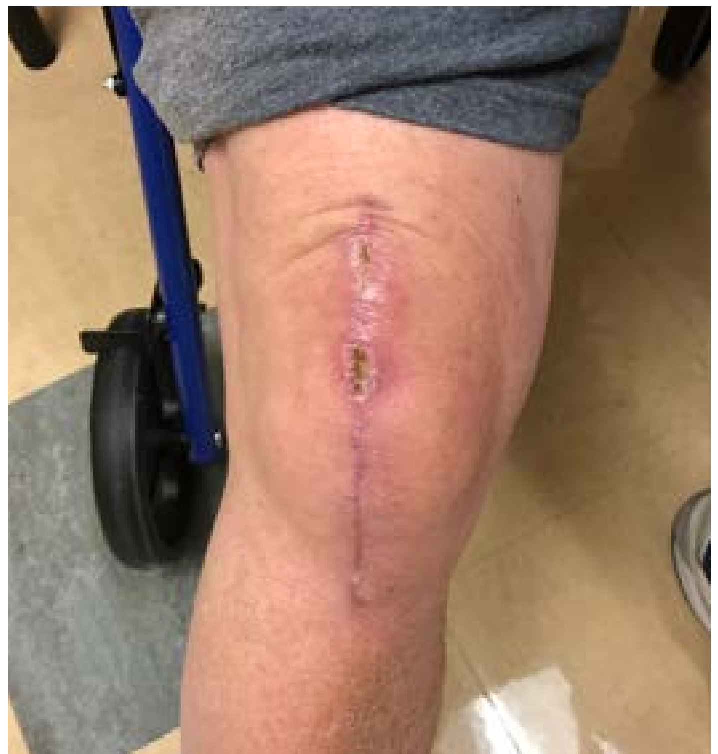
Several factors, both medical and surgical, determine the most appropriate setting for the procedure. If there is a possibility that the recovery might not go as smoothly as anticipated (usually medical factors and, occasionally, surgical factors), necessitating an overnight stay, surgery will be performed in a hospital setting for the added security. Conversely, many younger patients with few medical comorbidities are excellent candidates for outpatient procedures at a surgery center. We aim to schedule them there when feasible. However, due to the current higher availability of hospital-based slots and scheduling challenges at surgery centers, we sometimes offer hospital surgeries to patients who could have had their procedures at outpatient centers, provided they are comfortable with this arrangement.

Addendum

Total Knee Replacement - 2 Weeks Post-Operatively

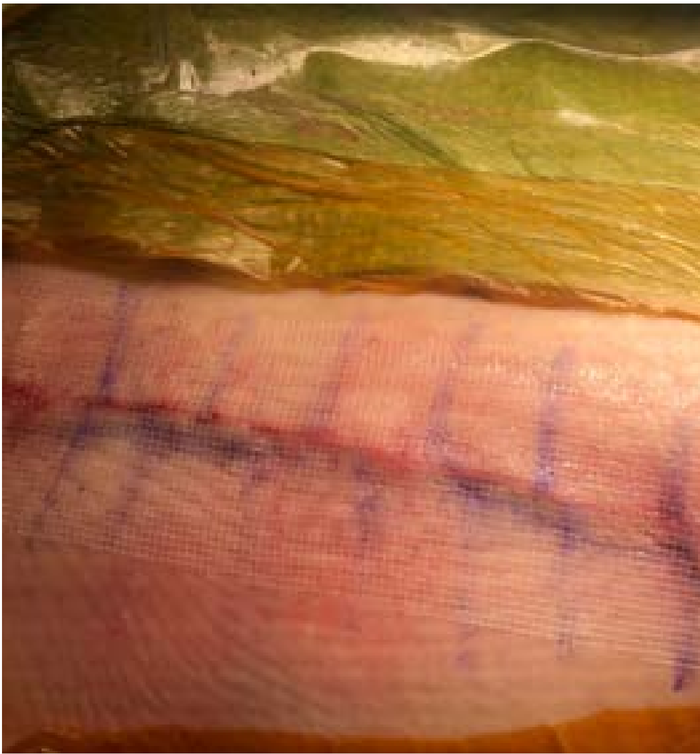
Total Knee Replacement - Healed

Mild Bleeding - Normal



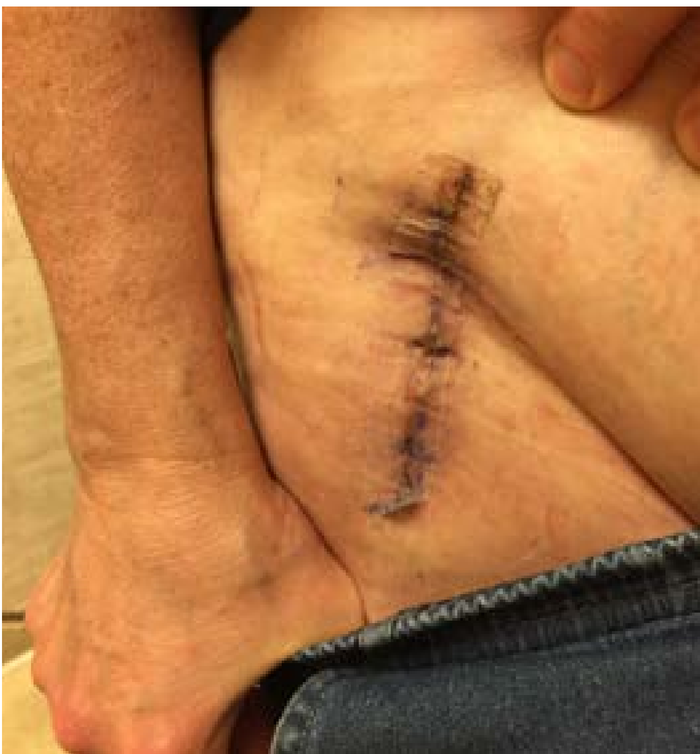
Slight Scabbing Around Incision - Normal

Addendum

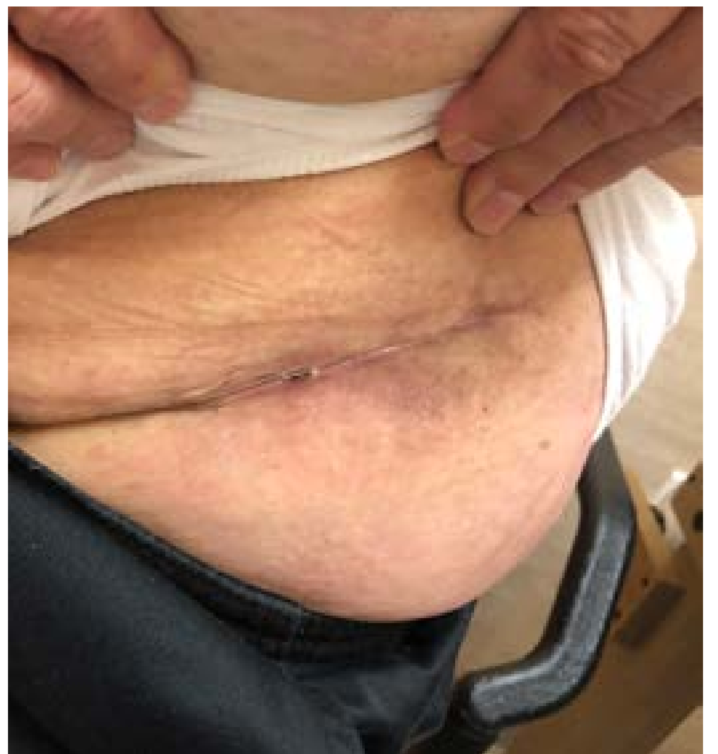


Total Hip Incision with Mesh Dressing

Total Hip Replacement - 2 Weeks Post-Operatively



Total Hip Replacement - 2 Weeks Post-Operatively



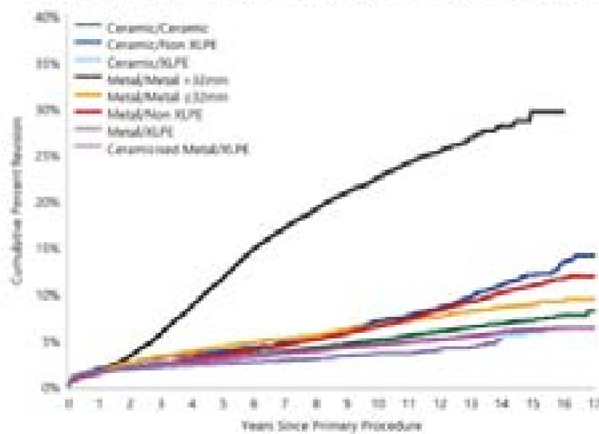
Bikini Incision Total Hip Replacement - Healed

Addendum

Total Hip Replacement - Oxinium on Oxinium

Unsurpassed Survivorship in Hips

- OXINIUM/XLPE hips achieved 96.5% survivorship at 10 years[1]



"... the Registry urges caution in the interpretation of this result. This bearing is a single company product, used with a small number of femoral stem and acetabular component combinations. This may have a confounding effect on the outcome, making it unclear if the lower rate of revision is an effect of the bearing surface or reflects the limited combination of femoral and acetabular prostheses."

[1] Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR). Hip, Knee & Shoulder Arthroplasty: 2018 Annual Report. Adelaide: AOA, 2018. Figure has been reproduced in exact and complete form. For a full copy of the AOA National Joint Replacement Registry report, see

Hip Implant Longevity