



# **ORTHOPAEDIC SPECIALISTS OF SCOTTSDALE**

## **Total Hip Arthroplasty (Total Hip Replacement)**

### **A Patient's Guide**

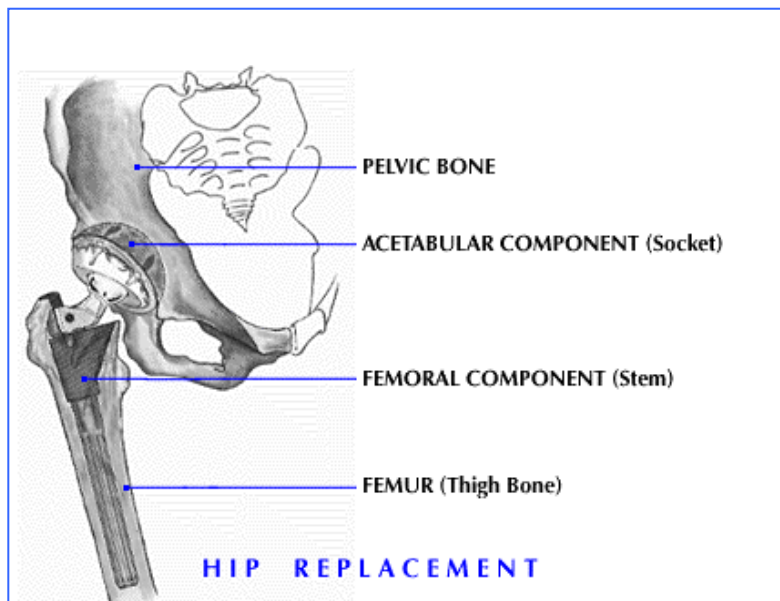


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## Foreword

This booklet has been developed by Dr. Kaper for his orthopaedic surgery patients at Orthopaedic Specialists of Scottsdale. It is used in conjunction with instruction from the rehabilitation and nursing staff. This booklet should not be given to patients under the care of other orthopaedic surgeons, whose surgical approaches and post-operative management of total hip replacements may vary from his.



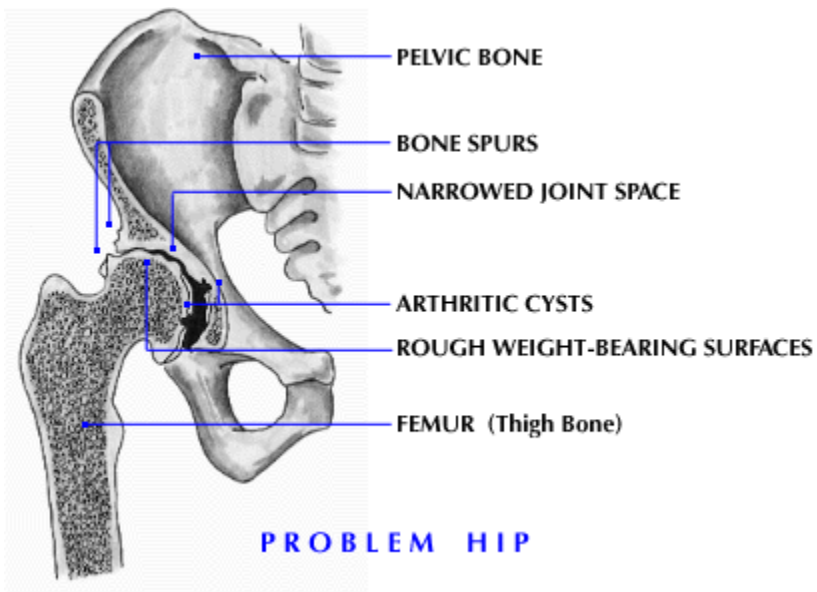
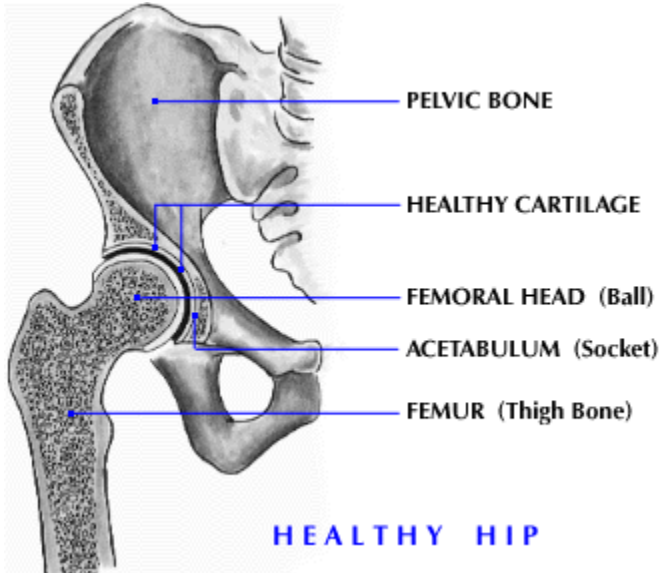
## **Introduction**

Welcome to Orthopaedic Specialists of Scottsdale. In preparation for your surgery, we have provided you with this information booklet to help answer some of your questions and concerns about Total Hip Replacement. We hope that you find this booklet helpful. If after reading this guide, you still have any concerns about the surgery, hospitalization, or other aspects, we encourage you to contact us. Our office telephone # is 480-305-0034. Further helpful information is also available at our website: [www.ScottsdaleOrthoSpecialist.com](http://www.ScottsdaleOrthoSpecialist.com).



Please remember that each patient will respond and recover from total hip replacement surgery according to their own individual situation. It is helpful to “compare notes” with others who have undergone or are undergoing the same surgery. However, because everyone is different in terms of their medical condition and needs, do not place undue importance on “keeping up” with your neighbor/friend/relative.

## Anatomy of the Hip



## **Surgical Overview**

Hip replacement, or “total hip arthroplasty” surgery, is a surgical procedure to replace the damaged cartilage within the hip with an artificial prosthesis or implant. This surgery is an option for patients who have severe arthritis of the hip. Arthritis means that the cartilage cushioning designed so that the bones do not rub against each other is severely damaged or worn out. Patients with severe arthritis of the hip are often challenged by even simple activities, such as walking or climbing stairs. Surgery can be considered when all other available treatment options have been exhausted and your quality of life is significantly affected by your arthritic hip.

Various types of arthritis may affect the hip joint. Osteoarthritis, a degenerative disease of the joints, is the most common form of arthritis. It affects mostly middle-aged and older adults with breakdown of the joint cartilage. Rheumatoid arthritis causes inflammation of the synovial membrane of the joint with secondary deterioration of the joint cartilage. Previous injury or injuries to the hip may result in post-traumatic arthritis, with significant damage to the joint cartilage. Any of these forms of arthritis can lead to irreversible damage to the hip joint, resulting in pain, swelling, stiffness, weakness, or even instability in which the hip may “give-way”.

Hip replacement surgery is a treatment option for hip pain and disability. The surgery is designed to replace the ball and socket of the hip joint. Think of it as getting new tires on your car. The goal of hip replacement surgery is to reduce or relieve pain in the hip. Realistically speaking, hip replacement surgery does not give you the hip you had when you were twenty-one. It does, however, significantly improve the quality of your life, which is often severely limited by the pain of hip arthritis.

## **Hip Replacement Prosthesis**

Many hip replacement systems have been developed over the past 50 years. There are many different orthopaedic implant manufacturers whose products do vary in design and materials utilized. There is a lot of information online that patients can read and research about all the different prostheses available. This can be confusing to try and understand.

Dr. Kaper uses the “VERILAST” Total Hip Replacement, made by Smith & Nephew. This choice reflects what Dr. Kaper believes to be the best designed prosthesis on the market today. In both design and biomechanics, it most closely replicates the anatomy and function of the normal human hip. The materials used to manufacture the prostheses are made from the combination of Oxidized Zirconium (“Oxinium”), highly cross-linked polyethylene (XLPE) and titanium. This combination of materials is referred to as a “VERILAST” THA and has proven to be extremely durable for hip implants.

For specific implant information, please ask us or visit their website:

[www.rediscoveryourgo.com](http://www.rediscoveryourgo.com).

## **Direct Anterior Approach Total Hip Replacement**

The technique used to accomplish hip replacement surgery varies from surgeon to surgeon. Dr. Kaper routinely performs the “direct anterior” approach, or DA total hip replacement, to replace the hip joint in the least invasive way possible. Using specialized operating room equipment, including the HANA operating room table, this technique allows the surgery to be done *between* the muscles on the front of the hip, rather than cutting or releasing any muscles or tendons around the hip. This means less trauma to the body to facilitate the safest and hopefully the quickest recovery possible.

The incision for the DA total hip is on the front part of the hip and thigh, usually three to four inches in length, depending on the size of the patient. Numbness to the lateral thigh is not unusual after this surgical approach- but fortunately should not cause any functional problems and gradually resolves with time.

The added benefit of the DA total hip technique is the ability to use a live x-ray machine, known as fluoroscopy, during the surgery. This intra-operative x-ray allows Dr. Kaper to verify appropriate position, size and placement of your new hip prosthesis while in the operating room. Risks such as dislocation of the hip replacement have been reduced with this technique.

With the Direct Anterior surgical technique, surgery can now be safely performed on an “outpatient” basis. This means that patients are able to go home either the day of surgery or the following day. To find out what is best for you, please discuss with Dr. Kaper or his office staff.



## **Pre-Admission Evaluation**

Before your scheduled surgery date, arrangements will be made for pre-operative testing. This will give us the opportunity to have all necessary medical testing and registration done before your surgery. Although a common surgery, total hip replacement is a major procedure that can stress even the healthiest body. For this reason, it is important that we check and optimize your overall medical condition prior to surgery.

Typical testing before surgery may include:

- *Laboratory tests*
- *EKG (heart tracing)*

A thorough check-up with your primary care physician is recommended. If there are specific medical concerns, additional pre-operative evaluation may be necessary.

You will have the opportunity to meet with the anesthesiologist on the day of surgery to discuss the different types of anesthesia available. These include:

- General anesthesia – when you are “asleep” for the surgery.
- Spinal anesthesia – when you are “numb” from the waist down;

Discuss any questions you may have with the anesthesiologist. Do not feel that your questions are “silly”. To be informed and knowledgeable about your surgery is important and will help you to understand what to expect during and after your surgery.

Blood transfusions are rarely needed after hip replacement. Statistically, less than 1% of all patients undergoing total hip replacement may need a blood transfusion. All patients are recommended to use a pre-op Iron or Ferrous sulfate supplement.

After surgery, most patients will spend just one night in the hospital. For some patients, the option also exists to go home on the same day of surgery- without the need to stay in the hospital. Dr. Kaper and his staff will assess each patient's individual circumstance and make appropriate recommendations for you. On a rare occasion, a patient may

require a short stay at one of the local rehab or nursing facilities. This is typically only recommended if a patient has no local family or resources to aide them in their initial postoperative recovery.

To determine post-operative needs, these are typical questions that are asked:

1. Do you live alone?
2. Do you require assistance for daily living?
3. Do you have any concerns about returning home after your surgery?
4. Are you interested in information about facilities that can provide care and rehabilitation before returning home?

Alternatives to discharge directly home include: rehabilitation centers and skilled nursing facilities (also known as extended care facilities). Please be aware that many insurance companies, including Medicare, will not typically authorize the use of an acute rehab center after surgery.

## **Helpful Hints in Preparation for Your Surgery**

### **STARTING NOW:**

Prepare yourself:

- Stop smoking- it is extremely detrimental to your health and healing
- Participate in the recommended “pre-hab” program- a course of physical therapy that will aide in your post-operative recovery
- Exercise to improve and maintain muscle strength
- Eat well-balanced meals and take a multivitamin
- Get plenty of rest
- Stop or cut-back on alcohol consumption
- Keep a notebook handy to write down any questions you may have for Dr. Kaper, the PA/NP, physical therapist, nurses or staff

Prepare your home:

- Stock your refrigerator and pantry (e.g. pre-cooked or frozen dinners)
- Obtain or rent a walker and/or crutches, a raised toilet seat / shower chair
- Arrange for support from family and/or friends for everyday activities

### **THE DAY BEFORE SURGERY:**

- Confirm your surgery time- you will be contacted by the surgery coordinator to confirm your surgery time. Make sure we have an up-to-date telephone number to contact you, if there are any changes in your surgery schedule.
- You may have your regular dinner
- Wash your body from the neck down with Hibiclens soap as instructed.
- Consult with the nurse or your doctor to determine if you should take your morning medications the day of surgery.
- Make sure you have filled any prescriptions that you were prescribed for you at your pre-operative visit.

## **The Day of Your Surgery**

On the day of your surgery, you will report to the Admitting office at the hospital.

Remember:

- **Do not** eat anything within EIGHT hours of your scheduled surgery time
- It is OK to drink “clear” liquids (any fluid that you can see light through) up till THREE hours prior to surgery
- You may brush your teeth
- Wash the affected leg and hip with Hibiclens soap as instructed.
- Please do not wear or use any skin moisturizers, cream, lotions or make-up.
- Wear comfortable, loose-fitting clothing.
- Remove hairpins, wigs, and jewelry.
- Please do not bring any valuables with you.

From the admitting desk, you will be brought to the Pre-op area. The nursing staff will be there to assist and prepare you for surgery. You will typically be asked on several occasions which hip will be operated on- this is simply a precautionary step to prevent any problems whatsoever.

To reduce the risk of phlebitis (swelling of your veins) and deep venous thrombosis (DVT or blood clots), intermittent compression sleeves will be placed on your legs. These will help maintain good circulation. The sleeves will be used while you are in bed.

325 mg enteric-coated Aspirin (E.C. ASA) daily is routinely used as a blood-thinning medication after surgery. For patients determined to be at higher risk for blood clots, a medication such as Coumadin or Xarelto may be used instead of Aspirin. These medications, when used in conjunction with regular movement and exercise, will maintain good circulation in your legs. This will minimize the risk of blood clots.

## **After Your Surgery**

### **Recovery Room**

When your surgery is completed, you will be taken to the recovery room, also called the Post-Anesthesia Care Unit (PACU). You will have your blood pressure and pulse checked frequently. The nurses will check your dressing, ask you to wiggle your toes, and have you take deep breaths.

Your orthopaedic surgeon will tell your immediate family when the surgery has been completed. Please inform your family that even if your surgery takes only a short time, you will have to remain in the recovery room until you are awake and considered to be “stable”. Once the nurses have determined that you are “stable”, you will be transferred to the orthopaedic unit.

### **Movement**

Performing simple ankle pumps and circles is recommended after surgery. Your nurse and therapist will remind you of this. This movement helps promote good circulation to your legs and feet.

After surgery, our goal is to mobilize our patients as soon as possible. Depending on the timing of your surgery, this will mean that the therapist will either get you out of bed the afternoon of your surgery, or first thing the next morning. You will be taught how to walk using a walker. During your post-operative stay, the therapist will work with you on your hip exercise program. Most patients are allowed to be “weight-bearing as tolerated” on their operated leg. Your surgeon and therapist will instruct you in this regard.

### **Breathing**

To prevent respiratory (lung) complications, such as pneumonia, after surgery, you will be encouraged to take deep breaths and cough regularly.

**Wound Care**

Your incision will be covered with an occlusive surgical dressing. A small portable vacuum seal surgical “wound vac”, known as a PICO dressing, may be used as well. Under this dressing you will have a dark gray/black “silver nitrate” dressing used to reduce the risk of infection. This entire dressing will be removed at your postoperative visit- you do not need to change the dressing prior to that time. The incision used for hip replacement surgery is approximately three-four inches long and will be closed with absorbable sutures or a Zipline dressing. There are usually no staples or sutures that will need to be removed. Showering is permitted 24 hours after surgery. Soaking the wound is not recommended for an additional 4 weeks (**NO** swimming, hot tubs, or tubs baths) until the skin is completely healed.

Additional information about the PICO wound vac and Zipline can be found on these websites:

<http://possiblewithpico.com/introduction>

<https://www.ziplinemedical.com/>

It is important to monitor your wound for any signs of infection. Possible signs of infection include increased redness, worsening swelling, drainage from the wound, fever (greater than 38.5° C or 101° F) or chills. If any of these symptoms occur, please notify our office.

**Diet & Hydration**

You will be able to drink and eat solid foods right away, according to how you feel. Hydration after surgery is very important for a healthy recovery. It is a good idea to drink twice as much fluid as you normally would for the first several days after surgery. This should include water, juices, ginger ale, and sport drinks. Your appetite may not return for several days or even weeks following the surgery. This is not uncommon.

Dr. Kaper routinely recommends peri-operative vitamins and supplements, including: a daily multivitamin, Vitamin D3 5000 IU once a day, Zinc 50mg twice a day, Vitamin C

500mg twice a day and Vitamin B1 (thiamin) 100mg twice daily. These should be used for four weeks prior and four weeks after surgery.

### **Pain Management**

After surgery you will have hip and muscle pain- this is normal. Pain management is one of the most important factors influencing the outcome of your rehabilitation. While in the hospital, we encourage the use of oral, rather than intravenous (or IV), pain medication- this reduces the possibility of nausea, vomiting, and confusion, which are common side effects of IV pain medications. Pain medication is intended to keep any pain at a “manageable” level. The goal of pain management is to allow you to participate in your rehab and physical therapy, while keeping any pain at a tolerable level. A prescription for pain medication will be provided to help manage postoperative pain. The use of any narcotic or opioid should, however, be approached with significant caution. There are multiple ways to control pain that are far more effective than using “pain pills”. This includes ice, non-steroidal anti-inflammatory medications and Tylenol. We strongly encourage you to minimize and discontinue narcotic pain medications as soon as you are able. Please be aware that addiction to narcotics can develop within only one week of use.

### **ICE, ICE, ICE!**

The use of ice on your hip is extremely helpful to control inflammation, which is the cause of post-operative pain and swelling. Specific icing instructions and guidelines are provided to you. Icing a minimum of four times per day, 15-20 minutes at a time, is recommended for the first several weeks after surgery. We encourage our patients to ice even more frequently to help control pain. Ice the area around the hip anytime you notice significant pain or after exercise. The thigh and buttock muscles can also be sore and painful after surgery. Icing sore muscles is also encouraged.

## **Physical and Occupational Therapy**

### **Physical Therapy**

Pre-operative physical therapy is routinely recommended and will be prescribed for you. A physical therapist will instruct you for exercises that will help strengthen your muscles and improve the flexibility of your hip prior to your surgery. The therapist will also teach you the exercises that are recommended after surgery. One of the most important factors influencing the results of hip replacement surgery is *your* active participation and commitment to the rehabilitation process. The exercises and stretching that are necessary to recuperate from hip replacement surgery should be looked at as an investment in the long-term success of your surgery. The more you put into your rehab, the more you stand to gain.

A physical therapist will show you the kind of exercises that are recommended after total hip replacement.

Exercises #1-7 are done lying on your back.

1. Ankle pumps and circles
2. Gluteal sets
3. Quadricep sets
4. Hamstring sets
5. Short-arc quadricep exercise
6. Knee bends
7. Leg out and in (abduction & adduction)

Exercises #8-10 are done while standing with your walker or next to a table.

8. Knee bend and lift
9. Standing knee bends
10. Leg out and in (abduction & adduction)



A regular and regimented physical therapy and exercise program should be part of your everyday schedule for two to three months after surgery.

**Occupational Therapy**

During your stay, you may also be seen by an occupational therapist (OT). The OT can provide assistive devices such as a reacher and long sponge and instruct you in how to use them while performing your activities of daily living. In addition, your therapist will gather information about your home, especially the bathroom, to help plan for your safety after you leave the hospital. The OT will instruct you in getting in and out of a shower or tub, as well as on and off the toilet without putting undue stress or weight on you affected leg. You will also learn to wash and dress using the assistive devices while adhering to any hip precautions. The therapist works with your family, doctor, and nurse to make recommendations to keep you safe after you are discharged.

## Going Home

Typically, your surgeon will clear you for discharge home if:

- You are medically stable;
- You are cleared for discharge by the physical therapist;
- Your temperature is normal (less than 38.5° C or 101.5° F);

The trend over the last ten years has been for shorter and shorter hospital stays. While the trend was initially driven by cost concerns, orthopaedic surgeons have come to realize that shorter stays in the hospital actually decrease the post-operative complication rate. The longer the hospital stay, the higher the risk of hospital-acquired infection. A typical stay after total hip replacement is just an overnight stay. For some patients, the surgery can actually be done very safely on an outpatient basis, without the need for a hospital admission.

For patients going home, home health can be arranged- several home health agencies are available locally. Home health offers in-home physical therapy, nursing services, and social services as needed. Services are usually provided for the first one to two weeks after discharge from the hospital.

You will be discharged with pain medication- these are narcotics or “opioids”. Opioid overuse is, unfortunately, widespread in the USA. Only a limited quantity of opioids should be used after surgery. Arizona state law only allows very limited prescribing of opioids. The use of opioids should, therefore, be stopped as soon as possible after surgery. Dr. Kaper will typically prescribed Tramadol for post-op pain management.

Occasionally, patients have problems with constipation, usually secondary to the pain pills. You may use Colace (a stool softener), Milk of Magnesia, a Dulcolax suppository, Magnesium citrate or a Fleets enema, if necessary. You can help prevent problems by drinking plenty of fluids, eating high-fiber foods, walking, and exercises.

## **Total Hip Replacement Patient Precautions**

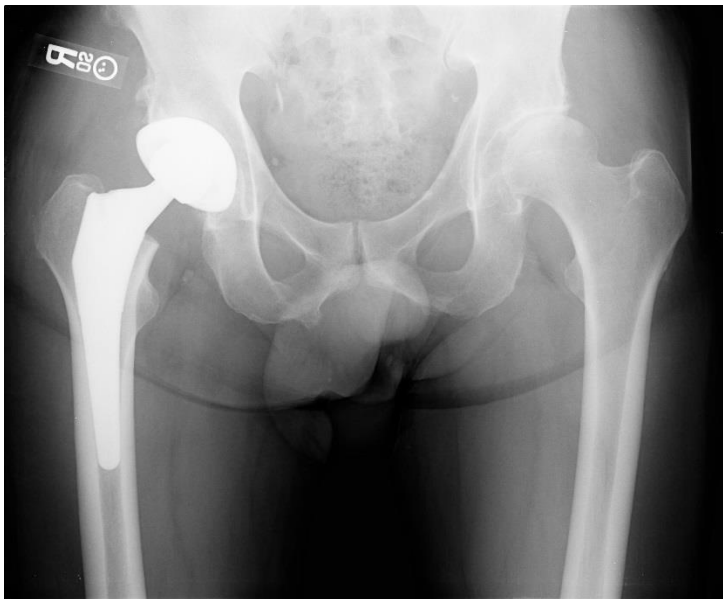
For the first six weeks after surgery:

### **DO NOT:**

- Overdo activities
- Sit on low chairs, sofas, or stools
- Sleep on your stomach
- Hyper-extend your new hip
- Twist or pivot on your new hip

### **DO:**

- Continue your exercises as taught by physical therapy, one to three times a day
- Use a walker or cane until you can walk without a limp



## **Surgical Risks**

Total hip replacement is a major undertaking. Just as with any other surgery, there are significant risks involved. Fortunately, the benefits that you stand to gain from the surgery have been shown to significantly outweigh the risks. Nonetheless, it is important that you are aware of what may occur during or after surgery. Just as you do not want to have any problems related to your surgery, your doctor does not either.

Risks include, but are not limited to the following:

**Wound Infection-** you will be given one dose of intravenous antibiotics before and after your surgery; this will reduce but not eliminate the risk of infection; if your new hip becomes infected, the prosthesis may have to be completely removed and an extended course of antibiotics administered.

**Pneumonia-** can occur after surgery; breathing deeply and using the spirometer are very important to prevent congestion in the lungs which may lead to pneumonia.

**Bleeding-** less than 1% of patients may require a blood transfusion after surgery.

**Blood Clots-** in the legs (as a deep venous thrombosis, or DVT) or in the lungs (as a pulmonary embolus, or PE) may occur after surgery. Fortunately, early mobilization/walking and the use of a blood thinning medication will significantly reduce the risk- but does not eliminate this risk altogether.

**Dislocation-** your artificial hip is not as stable as your own hip; consequently, dislocation or “popping” the hip out of joint can occur. With the use of the Direct Anterior approach for hip replacement, the risk of dislocation is less than 0.1%.

**Nerve or Blood Vessel Injury-** there are several large nerves and blood vessels that lie very close to your hip joint; the potential for injury to a nerve or blood vessel is possible during the surgery. With the Direct Anterior approach for hip replacement surgery, some

patients will experience numbness on the outer part of the upper thigh. This numbness is usually temporary and resolves over the course of several months.

**Leg Length Difference-** in many patients before surgery, the length of each leg is not the same. This may in part be due to the arthritis in your hip; your surgeon will attempt to “balance” your leg lengths, however, some difference in lengths may still occur, due to spine arthritis and/or muscle weakness. This can be minimized with a shoe cushion.

**Fracture-** fractures of the thigh bone or pelvis can occur at the time of hip replacement; this risk is increased in patients with underlying osteoporosis or weakening of the bone.

**Need for Future Revision-** although the prostheses used today are the product of many years of research and development, the science has not yet been perfected; typical hip replacements nowadays will last approximately 20 years.

**Medical risks-** hip replacement surgery is a major operation and can stress even the healthiest body; medical complications, as well as problems with anesthesia, may be severe enough to result in death. If there are any questions or concerns in this regard, please feel free to discuss them with your surgeon.

**Muscle weakness-** weakness involving the hip muscles is common with severe arthritis. Appropriate therapy and exercise before and after surgery will help strengthen the muscles and aid in your recovery.

## **Frequently Asked Questions**

**Q:** When will I need to return for follow-up?

**A:** You will be seen about seven days, six weeks, and four months after your hip replacement. After that time, periodic follow-up appointments with x-rays are typically recommended.

**Q:** Will I set off the metal detector at the airport because of my hip replacement?

**A:** Yes, you may. We recommend that you advise airport security that you have a total hip replacement. The TSA, unfortunately, no longer recognizes joint replacement identification cards.

**Q:** Should I tell my dentist or doctor that I have had a hip replacement?

**A:** Yes. For routine dental work however, antibiotics are no longer recommended.

**Q:** When can I resume any exercise program?

**A:** You should discuss this with your surgeon before engaging in any form of exercise other than walking or the exercises your therapist prescribed. Your therapist will give you exercises to do in the hospital and then at home.

**Q:** When can I drive?

**A:** Driving is not permitted until you return for your follow-up visit with your doctor. Usually this restriction is lifted after two to three weeks, sooner if felt appropriate by your surgeon.

**Q:** When the weather is cold, will I notice the temperature in my new hip?

**A:** No, most people do not notice any significant difference.

## **Long-term Care of Your Total Hip Replacement**

**Protection-** Treat your new hip with care. The better care you take of the hip, the better it will take care of you. Remember that just as your own hip was worn out, your new hip can also wear out with time.

**Sports-** Your new hip is designed for activities of daily living (ADL's), not repetitive, high-impact sports. Walking, swimming, and bicycle riding are recommended. Aggressive jogging or running, jumping, and repeated heavy lifting should be avoided.

**Infection-** Your new hip is a prosthesis and the body considers it a foreign object. If you become sick with a serious infection, the bacteria can travel through your blood stream and enter your hip joint. Infection in an artificial hip is a very difficult problem to manage. Therefore, prevention is the best type of medicine. If you develop a high fever, or an infection (for example, bladder, skin, or dental), seek medical attention immediately. Your medical doctor will determine if antibiotics are necessary, and if needed, he or she may consult with our office to prevent any problems.

**Dental Work-** Antibiotics are no longer routinely recommended prior to dental work. Exceptions would include patients with diabetes, rheumatoid arthritis, or those patients receiving active chemotherapy or taking immune-suppressive treatment.

**Surgical Procedures-** If you are scheduled for any future surgery, you may require antibiotics. You should notify your physician that you have an artificial hip replacement.

**Follow-up care-** Because the material technology being used for total hip replacement is not perfect, your artificial hip can wear out with time. It is, therefore, important, that you return to see your surgeon for periodic check-ups. Although you may not notice any symptoms, x-rays can often detect early signs of problems with artificial hips. If such problems are detected early enough, they are often much easier to treat.



Our goal is to provide you with the highest quality of orthopaedic care that will lead to the most successful outcome, with the lowest possible risk of complications. If you have any additional questions or concerns, please let us know. We appreciate the confidence you place in us and look forward to aiding you through the entire surgical process.

If you have any additional questions or concerns, please do not hesitate to let us know.

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