TOTAL HIP REPLACEMENT

Kevin P. Hanlon, D.O.

Board Certified in Orthopedic Surgery
Center for Orthopedic Surgery
Special interest in Joint Reconstruction
& Arthritis Surgery

Clinton Township Location
21550 Harrington Suite A,
Clinton Township, MI 48036

Shelby Township Location
8180 26 Mile Rd.
Shelby Township, MI 48316

Phone: 586.627.1100
Fax: 586.627.1120

www.orthodoc.aaos.org/khanlon

COS hips
Center for Orthopedic Surgery

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Introduction

The purpose of this manual is to familiarize the patient with total hip replacement. Please keep this manual and refer to it often. Think of it as an owner's manual for your hip replacement. At any time if you have questions or concerns that are not adequately addressed here, do not hesitate to call my office.

This manual will cover normal hip function, conditions that may interfere with normal function, and hip replacement surgery. I will also cover the steps in preparation for surgery, the events the day of surgery, and what you can expect during your postoperative stay. I have also described the first six weeks after surgery and the long-term considerations of total hip replacement.

The Normal Hip Joint

The hip is an amazing joint. It is one of the strongest weight-bearing joints in the body and allows you to perform many basic body movements everyday. The hip is designed as a ball-and-socket mechanism with the head of the femur joining the socket portion of the pelvis called the acetabulum. Protective cartilage layers cover the femur and acetabulum absorbing shock and allowing the ball to glide smoothly within the socket. In addition, the tissue capsule, which encloses the joint is lined by a membrane that produces fluid for joint lubrication. Strong band-like tissues called ligaments reinforce the hip joint and provide strength. The hip joint is designed to last a lifetime; however, arthritis or other conditions may interfere. Over time these conditions may become chronic resulting in severe pain and disability affecting one's quality of life.

The Arthritic Hip Joint

When a joint becomes arthritic, degeneration and inflammation of the cartilage, bone and surrounding tissues occurs. Arthritis generally presents later in life and is characterized by the gradual onset of pain, disability, and deformity. However, this process can occur more rapidly in younger individuals, particularly if the joint is deformed or has been injured. The most common form of arthritis is osteoarthritis (degenerative arthritis). Arthritis may also be caused by inflammation (rheumatoid arthritis) or be a result of trauma. Rarely, osteonecrosis (death of the bone) may occur and lead to arthritis. Regardless of the initial type of arthritis, the result is permanent with progressive damage to the cartilage and bone.

As the hip becomes arthritic, the protective cartilage covering that shields the bone from impact begins to deteriorate. Under stress from activity, the bones begin to grind together resulting in bone loss, cyst formation, spurring, and deformity. The person with severe arthritis of the hip may notice pain and stiffness with activities like standing, walking, stair climbing, getting in and out of a car or putting on socks and shoes. One leg may feel shorter than the other and the ability to perform daily activities may be very limited. As the arthritis worsens, an individual may experience pain at rest or at night during sleep.

Total Knee Replacement

How do I know if I am a candidate for hip replacement surgery?

Hip replacement surgery is typically indicated for individuals that are no longer benefiting from non-surgical treatments such as medications, therapy, walking aids, injections, and activity modification. When the pain and interference in daily activities is significant and quality of life is diminished, surgery should be considered. A hip replacement can last many years and result in much improvement in overall health and well-being. However, if you are still relatively young, hip replacement may not be the best choice and other surgical options may be considered.

What is total hip replacement?

Total hip replacement surgery has become a common orthopaedic procedure in the United States. It is estimated that more than 120,000 such operations are performed each year. Hip replacements are done to alleviate conditions caused by osteoarthritis, rheumatoid arthritis, fractures, dislocations, congenital deformities, and other hip related problems. The surgery involves replacing the damaged surfaces of the hip with artificial surfaces. The head and the neck of the femur are removed and replaced with a metal or ceramic ball. Traditionally, the damaged socket is lined with a metal-backed plastic socket. Alternatively, metal on metal or ceramic on ceramic designs may be utilized.

Are there other types of hip replacement surgery?

There are two main types of hip replacements currently in use. They are commonly referred to as “cemented” and “cementless.” Cemented hip replacements have been performed since the early 1960’s. “Cemented” refers to the acrylic material used to anchor the implant to the bone. This “acrylic cement” functions just like a grout or filler material between the bone and the implant. The second type of replacement is termed cementless because acrylic cement is not used. The implants are designed with a porous- coated surface that is placed directly in contact with the bone. The bone is then able to grow into the porous surface to create a strong bond between the implant and the bone. This type of replacement has been performed since the early 1970’s.

The decision as to which type of replacement is used depends on the surgeon’s preference, the individual’s age, activity level, and characteristics of their bone (as determined by X-rays). Generally, in younger, more active individuals, I favor cementless (porous-coated) implants.

More recently, different types of articulating surfaces have been introduced. In addition to the traditional metal ball-plastic socket combination, metal on metal, ceramic on ceramic, and ceramic on plastic articulations can be used.

What are the benefits?

The immediate benefits of total hip replacements are great. The operation usually takes one to two hours; this is much less time than many other operative procedures. The hospitalization time is also relatively short, usually

about 3 days, with pain relief occurring with the first week – often immediately after surgery. Full recovery usually takes approximately four months. In most uncomplicated cases, after four months, a patient can expect to be relatively pain-free, have full mobility of his or her hip, walk with minimal or no limp, and lead a normal life.

How long does a hip replacement last?

Most individuals want to know how long their hip replacement will last. The answer is complex. The metal and plastic parts can be subject to wear and loosening just like any other mechanical device. A person’s activity level may also be important. Moreover, the issues of wear and loosening are usually important in younger individuals. Based on many studies, we know that the vast majority of replacements are functioning well 10-15 years after surgery. A small percentage (5-10%) may require another operation to exchange some or all of the parts. Thus over 90% of replacements never need revision.

What are the risks?

There are some risks common to all types of surgery (anesthesia or medical problems) as well as risks unique to hip surgery. These risks include, but are not limited to, anesthesia or medical complications such as heart problems, stroke, pneumonia, or urinary infection. Complications related to hip surgery include: the possibility of infection, bleeding, wound problems, excessive bone formation causing hip stiffness, nerve or blood vessel injury, blood clot formation, leg length inequality, fracture, component loosening, implant failure, metal ion accumulation in the blood, and hip dislocation. The risks of these problems are small (approximately 5%) and they are usually correctable.

The Initial Evaluation

During the initial evaluation, your hip problem and medical history will be reviewed. If you have had previous treatment for your hip pain and/or x-rays, it is important to bring these records with you.

The objective of this first visit is to determine whether hip surgery is indicated. This decision is based upon many factors, which include your degree of pain, severity of limp, the extent of decreased mobility, and your overall dissatisfaction with your condition. Another important consideration is your current health status. After evaluating your x-rays and completing the physical examination, I will be able to discuss with you the relative advantages and disadvantages of a surgical procedure and what the outcomes should be.

Preparing for Surgery

Once you and I have decided that hip replacement surgery is needed, questions arise. Experience has taught me that each patient has expectations which are different. It is important to me that my patients know what to expect postoperatively and during their hospitalization.

Screening for anemia and blood donation

It is important to assess your overall health before having surgery. This will be done in several ways. You will be checked for anemia. If your red blood

cell count is low, recovery from surgery may be more difficult. To correct this, you may receive injections (erythropoietin) during the month before your surgery. These injections help your body to produce more red blood cells, which prevents you from having to donate your own blood prior to surgery. It also significantly reduces your need for a blood transfusion after your operation.

Some individuals undergoing total hip replacement will require blood transfusion even with normal blood counts. In general, we prefer to have one to two units of blood available. We give patients the option of donating their own blood or using blood from the blood bank. It is very important for you to know that blood from the blood bank is safe and using this blood rather than your own may be better for you. The risks and benefits of autologous (self) donation versus bank blood may be discussed with us, your medical doctor, or the blood bank personnel. In general, preoperative blood donation is rarely necessary.

Medical clearance

It is always a good idea to see your primary care doctor before having surgery. In most cases, I will require that you have a clearance letter from your primary care doctor before surgery is scheduled. This is especially necessary when a person has multiple or severe medical problems.

Finishing dental work

You will be advised to complete any necessary dental work prior to surgery. This is important because untreated tooth or gum problems and receiving dental work after surgery can put you at risk for developing an infection in your new implants. As a result, it may take you longer to recover from surgery and in some cases the prostheses may have to be removed from the infected hip joint.

Medications

I need to know about all your medications. Some medications are not safe to take before surgery because they interfere with anesthesia or cause increased bleeding. You will be told which prescription and over-the-counter medications you may need to discontinue until after your surgery.

Pre-operative evaluation

At the end of your office visit, you will receive the phone number of the surgery scheduler. We will help you with insurance approval for the surgery and deciding on a surgery date. Once the date of your surgery is set, you will need to get some routine blood and urine tests. In addition, you may need a chest x-ray and electrocardiogram if you have not had these done recently. This information will be used to determine the type of anesthesia you should receive and screen for health problems that may need treatment before your operation. In general, you will need to be seen again by your surgeon just prior to surgery to have a complete history and physical examination performed. At this time, any remaining questions can be answered. You will register at the hospital after your evaluation and complete any lab tests that have been ordered.

Preparing your home

There are several things you can do to prepare for your time at home after your knee replacement surgery. For instance, it helps to put items you may need within reach so that you will not have to climb or bend down for them.

Avoiding falls after your surgery is very important. The floor should be kept uncluttered and items such as throw rugs or loose cords should be removed or taped down.

After your hip replacement surgery, you will not be able to drive for 4-6 weeks. It is a good idea to stock up on food and toiletries you may need. Also, having a friend or family member available to help you after surgery is important. Make these arrangements ahead of time.
Before your surgery, a physical therapist may come to your home to evaluate your therapy needs. The therapist will show you what modifications you may need to make for your recovery at home, such as moving into a bedroom downstairs. You may also need assistance devices after surgery, like a cane or walker.

It is preferred that patients recover at home, but if this is not possible, arrangements can be made for a short stay at a rehabilitation facility.

Preparing yourself

Once you have decided to have a hip replacement surgery, it is important to have a good attitude and commit yourself to a successful outcome. Your recovery is a team effort involving you, your family, your surgeon, and the medical staff.

You may also improve your surgical results by losing weight and starting a low-impact exercise program such as walking or cycling. It is important to quit smoking or cut back as much as possible.

Total joint replacement classes are held through St Mary's and Deaconess Hospitals, which many patients find very helpful.

The Day of Surgery

Arriving at the hospital

On the day of your hip replacement surgery, you will be admitted to the hospital. You will have been told when to stop eating or drinking and where you need to report. In general, you should not eat or drink after midnight the night before surgery. Plan to arrive two hours before your scheduled surgery time. When you arrive, there will be paperwork to complete. The nurse will make sure all your blood work and other tests are current. The nurse will take you to the pre-procedure room and have you change into a hospital gown.

When your chart is in order, your blood pressure, pulse, respiration, and temperature will be taken and an I.V. line will be started. The anesthesiologist will come by to talk with you, review your chart, and discuss options for anesthesia. Spinal versus general anesthesia are my preferences.

The operation

When it is time, the anesthesiologist and the nurse will escort you in a bed to the operating room. Once you have been transferred to the operating table, you will receive anesthesia. The nurse will then place a catheter in your bladder. A stocking and compression device will be placed on your non-operative leg.

Your hip replacement surgery should take between 1-1/2 to 2 hours. An incision will be made on the side of your hip. The damaged bone and cartilage in your hip will be removed and replaced with implants. A drain may be placed inside the wound prior to closure.

The recovery room

Once the operation is complete, you will be taken to the PACU (Post-Anesthesia Care Unit) by the anesthesiologist and I will speak with your family about the operation. In the PACU or recovery room, the nurses will monitor your condition as you recover from the anesthesia. This takes about two hours and family is typically not allowed to visit. After this time, you will be taken to your hospital room on the orthopaedic floor. If you have medical problems that require special monitoring, your surgeon or anesthesiologist may decide to keep you in the recovery room for a longer time.

Your Hospital Stay

Your room

Typically, the hospital stay is three days. Most patients are transferred to the orthopedic floor the day of surgery. There will be equipment in your hospital room to help you with your recovery. The bed will have a bar above it to aid you in changing positions. You will have compressive stockings and pumps on both legs to increase the blood flow in your legs and help prevent blood clots. A triangular-shaped pillow will be between your legs to keep them separated. The incentive spirometer is an important device used to prevent pneumonia after surgery and your nurse will show you how to use it. If applicable, the surgical drain is removed the day after surgery.

Managing your pain

Throughout your hospital stay, you will receive a cocktail of medicines to help with post-operative pain and nausea. Most patients receive local anesthesia to help with immediate post-operative pain. Up until your second post-op day, you will still have your I.V. line. Some of these medicines will be administered through your I.V. and others will be taken by mouth. You will have a PCA (Patient-Controlled Anesthesia) pump attached to your I.V. for breakthrough pain.

Prevention of blood clots

Developing a blood clot in your leg is a serious risk after surgery. The clots can travel to the lungs and cause a pulmonary embolism. Several precautions are taken to prevent this from happening. Compression stockings and pumps are put on your legs during and after surgery. Walking is started by the first day after surgery. However, some patients are at higher risk for developing blood clots and medications to thin the blood must be used such as low-molecular weight heparin, coumadin, or aspirin. If you are started on Coumadin (warfarin) in the hospital, biweekly blood draws will be performed after your discharge to monitor medication levels. Low-molecular weight heparin (Lovenox, Arixtra) is usually continued 2 weeks after surgery. Coumadin (warfarin) is usually continued 4 weeks after surgery.

Starting therapy

Rehabilitation begins the day of surgery. There will be leg exercises to do while in bed and your nurse will help you move from your bed to the chair. The physical and occupational therapists will usually see you the day after surgery. You will have different goals to meet each day to help you recover and be able to leave the hospital. The therapists will show you how to safely bear weight on your new joint utilizing a walker or crutches. You will also be taught how to manage daily activities such as dressing, bathing, and using stairs. There will be special precautions to follow to avoid dislocating your new hip.

Leaving the Hospital

Arranging for discharge

During your hospital stay, plans for your discharge will be made with the case manager. You will either go home with home care arrangements made or be transferred to a rehabilitation facility. The case manager will help you arrange for transportation, home nursing, physical therapy, and any assistance devices you may need.
Discharge instructions

When you are discharged, the nurse will go over my instructions and any medications you may need. Important things to remember are to keep doing your exercises at least twice a day and to wear your TED hose daily for two weeks. Continue any weight bearing restrictions, follow your hip precautions, avoid straight leg raises, and continue to use your abduction pillow in bed for up to 4 weeks. Your therapist will provide you with specific instructions for exercises, walking, and other activities to promote your recovery.

Pain medications should be taken only as needed. You may shower, but avoid tub baths, soaks, or swimming, and driving until your first appointment at four weeks. You should call me if you are experiencing increased hip pain, swelling, calf pain, increasing redness, warmth, drainage from your incision site, or fever over 100 degrees.

Recovery Phase

By six weeks, you should be feeling well but will still experience discomfort, swelling, and warmth around the incision site. At this time, return to normal daily activities is appropriate including full weight bearing and driving. Full recovery often occurs between six months and one year, although many patients return to recreation and unlimited lifestyle by three to six months.

Caring for Your Joint Replacement

Activities

It is generally best to avoid impact-loading activities, such as running, after hip replacement surgery. Be sure to discuss specific activities with me.

Weight-bearing

Patients with cemented hip replacements are usually allowed to bear weight as tolerated. Patients with cementless implants maybe instructed to bear about 25% of their weight for the first 4 to 6 weeks, then 50% for additional 2 to 4 weeks. These guidelines are modified on an individual basis. Generally, a walker or crutches are needed for 1 to 2 months and then a cane for an additional 1 to 2 months.

Postoperative hip dislocations

Dislocation of the hip is a potential complication of total hip replacement. Dislocation is when the ball comes out of the hip socket. Fortunately, the number of prosthetic hip dislocations has significantly decreased with the use of larger femoral balls. Dislocations are most likely to happen the first three months after surgery. To avoid this, you should memorize and follow your hip precautions. Typically, total hip precautions include:

//// Do not flex or bend the hip more than 90 degrees
//// Do not twist or pivot on the operated leg
//// Keep your legs apart and do not cross them at the knees or ankles.

These restrictions are removed with time (one to three months). If a dislocation does occur, the ball of the replacement must be placed back in the socket. This procedure is called a closed hip reduction and can usually be performed in the emergency room. If a dislocation occurs at home, patients generally call on ambulance transportation to the emergency room. After a dislocation, patients are sometimes asked to wear a brace for a few months to allow the soft tissues to heal.

Leg Lengths

Before surgery, your arthritic hip may have caused that leg to become shorter. The surgery should restore leg length equality. When this has been done, it is not unusual for the patient to feel as if his or her operated leg is too long. This sensation is sometimes present for several months following surgery. It disappears when a normal walking pattern is restored. Sometimes I need to lengthen the leg to obtain appropriate stability of the new joint. If this is bothersome, a small shoe lift can be worn to compensate.

Dental work

After hip replacement surgery, it is preferable to wait three months before having dental work done unless it is an emergency. When you are scheduled for a dental procedure, be sure to let your dentist know that you have had a hip replacement. You will need to take antibiotics ahead of time to prevent infection in your hip replacement. I will provide you with a hip replacement ID card to carry in your wallet.

Follow-up appointments

It is important to have your hip replacement checked even if you are experiencing no problems. Visits are scheduled at two to four weeks, three to four months, and six to twelve months. You should plan to return for x-rays between one to two years, at three years, five to seven years, ten years and every one to two years thereafter. If a problem is detected early on, it is often easier to correct.

Revision surgery

A small percentage of total hip replacement patients (5-10%) may require another operation to exchange some or all of the parts. This type of operation is called a revision. It is more complex and difficult, requires special techniques, and has a longer recovery period. Over 90% of replacements never need revision.

The most common reasons for revision surgery include: wear of the plastic cup (if applicable), loosening of the implant in the bone, recurrent dislocation of the hip joint, or infection. There are instances where reoperation is required for bone loss, wear, or loosening seen on X-rays even though there are no symptoms. Revision surgery is necessary to prevent further damage, which would require more difficult and complex procedures at a later date. This is one reason why we ask every patient with a hip replacement to return every 1 to 2 years for an evaluation and X-rays, even if they are doing well.

Frequently Asked Questions

How does the doctor decide if I need a hip replacement?

This decision is based on how much pain you have, your findings on X-ray, how difficult it is for you to walk, and how much these problems interfere with your activities or quality of life.

How long does the surgery last?

Approximately 1-2 hours, depending on the condition of your hip at the time of surgery.

How long until bone ingrowth occurs in cementless implants?

Between six weeks and one year (smoking can delay bone ingrowth).

Why and how long do I have to keep my legs apart?

To prevent the hip from dislocating; When the muscles around the hip joint mend and strength returns, they will hold the hip in its socket (this takes approximately 6-12 weeks).

How long will I have to limit weight on my leg?

It depends on the type of hip replacement and how well you do with your exercises. Most patients will be allowed to fully weight bear from the start. Certain patients with cementless stems will be allowed to increase weight bearing at four to six weeks.

Can I sleep on both sides?

Avoid sleeping on the operated side for four weeks.

Can I sleep on my stomach?

I do not recommend it for the first three months, because it is difficult to turn onto your stomach without twisting and risking possible dislocation.

How far can I bend forward when I have a new hip?

You must limit hip flexion for one to three months. You may bend forward until your fingertips are able to touch your knees (90 degrees of flexion), but no further. Remember to keep your knees apart.

When can I stop using the elevated commode?

After 3 months, unless otherwise instructed.

When can I get my hip wet?

You will be allowed to shower two to three days after your hip replacement. However, tub baths, soaks, and swimming should be avoided until after your 1st post-op appointment at four weeks.

When can I resume sexual activities?
Six to twelve weeks from the date of surgery. The therapist can review safe techniques.

When can I drive a car, swim or ride an exercise bike?
Usually, I will let you do these things at 4-6 weeks. It depends on the stability of your hip and the type of vehicle or exercise bike you own.

When can I start playing double's tennis or golf?
Active sports are generally not resumed until 4-6 months after surgery.

When will I be able to return to work?
I will let you know after your first follow-up visit. Everyone has a unique situation. Generally, for desk jobs, 4-6 weeks; for active labor, 3 months; and for heavy labor, 4-6 months can be expected.

How long should I keep doing the exercises?
You should do the exercises given to you at discharge until you return for your 1st post-op office visit. At that time, you may be given a new set of exercises (phase two exercises). You should continue to exercise until your muscles are pain-free and you can walk without a limp. It is a good idea to continue your exercises as a lifetime commitment to keep your muscles strong.

Can I ever cross my legs again?
Yes. This will be addressed at your 1st post-op office visit.

Do I need an X-ray at 12 months if my hip feels fine?
Yes. X-rays are an important part of each follow-up visit and essential in determining the amount of bone ingrowth, position of the implant, and the condition of the bone around the implant. A patient may not have any symptoms, and X-rays assure me that there are no problems developing.

Will my hip set off a metal detector?
With increased security measures at the airports, the implants in your hip will likely set off the metal detector. For this reason, I do provide you with an ID card should there be a need for you to notify others of your hip replacement.

When does the tape come off my wound?
At the time of surgery, tape-like strips (steri-strips) may be placed on your incision to protect it. They will eventually come off on their own in one to two weeks. Alternatively, you may remove them yourself after two weeks.

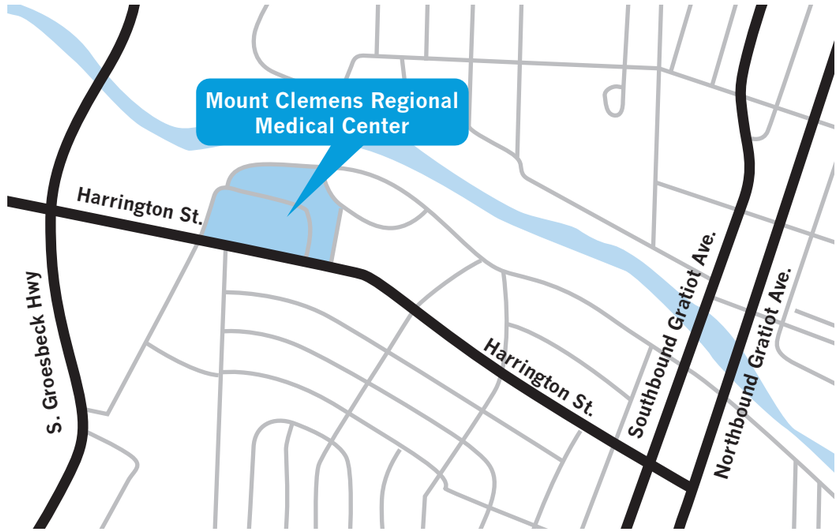
How long will my hip replacement last?
The durability of hip replacement implants is quite good. The majority will last a lifetime. Occasionally, implants can wear out or become loose over time.

Closing Remarks

I hope this information booklet was helpful to you. Remember to refer back to it when a question comes up. Please feel free to ask me any other questions when you see me in the office. I value my time with all my patients.

I would like to take a moment to thank Michael Boyd, D.O. for his help in preparation of this manuscript.

Map



Contacts

Mount Clemens Regional Medical Center,
1000 Harrington, Mount Clemens, MI 48043
Hospital - 586.493.8000
Orthopedic Floor - 586.493.8398
Surgery Center - 586.493.1500

21550 Harrington Suite A,
Clinton Township, MI 48036

8180 26 Mile Rd.
Shelby Township, MI 48316

Office - 586.627.1100
Fax - 586.627.1120

Residential Home Health
Phone - 866.902.4000

Notes