Orthopaedic Specialty Institute

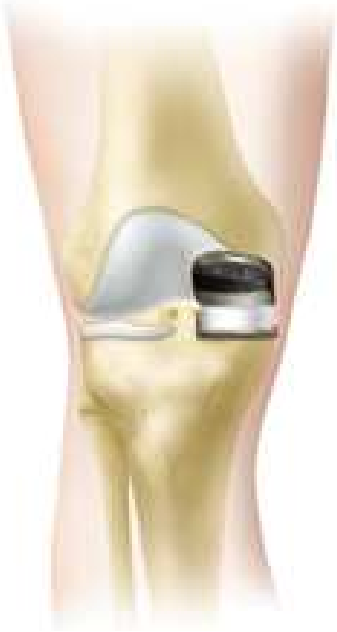
Partial Knee Replacement

Partial Knee Replacement is a surgical option for patients who have arthritis of one part of the knee. In general patients can have a quicker recovery than a total knee replacement. While this problem has seriously affected the quality of your life, there is a treatment. This brochure contains information on all aspects of your upcoming care, including preadmission, admission, surgery, rehabilitation, and follow-up care. If something is done to you to contradict this brochure, please question it. If something could be done better, anything, please bring it to the attention of any member of the Total Joint Team. We ask that you read this brochure and all paperwork from our office in its entirety, sign a form that you have done so and understand all the material.

It is the philosophy of the Joint Team to focus on all aspects of care so as to increase your satisfaction; not only with the surgery itself, but also with the process you go through before and after surgery. Objective data about you will be collected but also, your subjective evaluation (your opinion) will be asked for, and expected, along the way.

The main indication for partial knee replacement is pain. Pain relief is reliable and we expect to be able to relieve most, if not all, of your pain. This is achievable more than 95% of the time in nationwide groups of patients and in our own patients. We will try any other method before surgery to relieve your pain if it is at all possible. However, if there is bone on bone contact, surgery is an option. The other primary indication for partial knee replacement is poor function. A successful replacement will provide a stable limb that, although not like a normal joint, will provide good to excellent function in more than 95% of patients. Your surgical team will discuss with you the options of surgery and whether or not you are an ideal candidate for this surgery.

Arthritis simply means loss of cartilage within a joint. Cartilage is the soft covering over the bone ends forming the joint. When this covering is lost, the joint becomes painful, stiff, and function is lost. Most partial knee replacements are done on the inside of the knee or the medial compartment. A small minority of patients have arthritis isolated to the outside of the knee or the lateral compartment. A very small minority of patient have arthritis isolated to the patella and femoral compartment. The following types of arthritis can be treated with a partial knee replacement:



Osteoarthritis, or degenerative arthritis is the most common type of arthritis and is caused by a wearing away of cartilage. Osteoarthritis is seen to run in families (hereditary). It is also seen in people that have abnormal joints either from development or previous surgery, and those that have overused joints throughout their lives.

Post-traumatic arthritis is another major type of arthritis often treated with partial knee replacement. This problem is caused by an injury to the joint (such as with falls or car accidents) that destroys cartilage, bone, or both.

In a partial knee replacement, bony surfaces of the joint are prepared to allow application of metal and plastic devices to substitute for the destroyed cartilage and/or bone. The surfaces or cartilage areas of the bones are re-surfaced. The ligaments and tendons are preserved so that function of the joint is not compromised.

Currently, there are few options in regards to partial knee implants and bearing surfaces. The joint replacement team will discuss these with you.

RISK OF COMPLICATIONS

A partial knee replacement is major surgery. Complications are rare but we feel you should be aware of these in order to make an informed decision about your surgery. Some of the more common potential complications are outlined below and can be discussed with you in detail.

Infection

Infection occurs in less than 1% of all joint replacements but if it does, it can be devastating. This can take the form of a superficial wound infection requiring antibiotics and/or operative exploration and cleansing, or a deep infection down to the implant which might require implant removal, wheelchair use, prolonged intravenous antibiotics, and a period of months until another implant can be placed. On very rare occasions, the joint cannot be redone. You are given antibiotics before, during and after your surgery to minimize the risk of infection.

Late infection is also possible, throughout your life, many years after total joint replacement. This is thought to occur by bacteria from a distant site traveling to the implant. Bladder or kidney infections are the most common source of delayed infections but dental abscesses, infected ingrown toenails, foot surgery, or bacterial cellulitis infections can all pose a threat. If these infections occur, they should be treated immediately and our office notified. Also, simple teeth cleaning can cause bacteria from the mouth to get into the blood stream. It is felt that this poses a threat to the implant and antibiotics should be taken for this minor appearing procedure for varying periods of time based upon your health history. The best thing to do is to notify your dentist that you will be having a joint replacement. If dental surgery, bladder surgery, bowel surgery, rectal surgery or hemorrhoid surgery is planned after your total joint replacement, the operating physician or dentist should put you on protective antibiotics.

Limited Knee Motion

In very rare instances, a closed manipulation of the knee under anesthesia is necessary for limited motion. The knee is gently bent under anesthesia in an attempt to recover necessary joint motion. No open surgery is done to the knee. Results with manipulation vary and complications can occur, such as fractures or tendon injuries. Manipulation under anesthesia can usually be avoided by your cooperation with the outlined physical therapy program and working hard to achieve the desired goals of adequate knee motion.

Blood Clots

Blood clots can form in the veins of your calf, thigh, or pelvis. Clots can break away and travel to your lungs; this is called a pulmonary embolism. A pulmonary embolism can be life threatening. Care is taken to minimize the risk of blood clots with a blood thinning agent. The main risk of blood thinning agents is excessive thinning of the blood, causing bleeding. Early activity has been shown to be the best way to minimize the risk of blood clots. Some blood thinning agents require daily injections in the hospital and at home. The nurses in the hospital or surgery center will teach you or your family. Most patients are discharged on an enteric-coated aspirin once or twice a day. This will be discussed on your pre-operative appointment in more detail.

Wear and Implant Failure

The implanted components of a partial knee replacement are mechanical pieces and can wear out or break. Rare dislocation of knee replacement implants has been reported and may require further surgery. Only proven technology and materials are used. In general, the more active you are, the greater the potential chance of failure of the implant. With usual daily and recreational activity, however, your partial joint replacement should function well for many years.

Bone Fracture

On rare occasion during your surgery, your bone can crack with the insertion of the implant. This would be addressed at the time of surgery with screws or wires and may affect your recovery. There is also a chance of fracture of the bone around the implants after your partial knee replacement. If this happens, the knee may require further surgery.

Nerve Damage

There are major nerves that cross all major joints. There is a small possibility that one of these nerves can be damaged during surgery or afterwards. If so, this would leave you with weakness or numbness of the lower leg and foot, possibly requiring a permanent brace.

Leg Length Discrepancy

On occasion, there are certain deformities of the knee in which leg length can be an issue and require a small lift in the shoe post operatively. This will be discussed on an individual basis.

Reaction to Materials

Partial knee replacements are made of materials foreign to your body. These materials have been thoroughly tested but a small risk of allergic reaction exists. This risk is not high enough to warrant testing. If you are allergic to metals, or have problems with jewelry, let a member of the team know. Your surgeon may implant the following materials at his discretion: cobalt-chrome alloy, titanium metal/alloy, polyethylene plastic, stainless steel, hydroxyapatite (synthetic bone crystals), ceramics, bone cement, and bone graft. Some of these materials may not have final approval by the Food and Drug Administration, but are under ongoing investigation

Lack of Pain Relief

The partial knee replacement is often done for pain relief. However, the procedure may fail to relieve all of your pain.

Anesthesia Complications

There are risks associated with all anesthetic types. These risks will be discussed with you by your anesthesiologist, and will include heart attack and stroke.

Tendon Rupture

Although all tissues are protected during surgery, there is a very small risk of rupture of the patellar tendon or fracture of the kneecap after surgery. This may necessitate further surgery or result in weakness of the muscles that straighten the knee. A brace may be required. On rare occasions, the prosthetic knee may irritate tendons or ligaments in the knee, and may require further treatment or surgery.

Skin Necrosis

If you have one or more previous surgical incisions, there is a small risk that the skin across the front of the knee may not survive after surgery. If this occurs, plastic surgery may be required to repair the skin defects.

PREPARATION FOR SURGERY

Partial Knee Replacement is considered outpatient surgery. You should expect to go home the same day as your surgery. After it is determined that you are a surgery candidate, scheduling surgery can be done during an office visit or it can be done over the phone with our scheduling secretary. Prior to your surgery date, our surgery scheduler will contact you. She will review an important itemized checklist of instructions which include your surgery date, surgery time, and arrival time to the surgery center or hospital, pre-operative visit with the nurse practitioner or physician assistant, and pre-operative internal medical clearance. The hospital will contact you regarding pre-op lab work to be done prior to your surgery. Some patients need special clearances (example: cardiology) prior to surgery. This decision is based on your medical history. The checklist of instructions will be mailed to you. In addition to this list of instructions, we also ask you to follow the instructions in the "Prior to Admission" section of this brochure.

PRIOR TO ADMISSION

Please see the Internal Medicine physician listed on your checklist for a history and physical examination. If this is NOT done, your surgery may be cancelled.

Do not take non-steroidal anti-inflammatory (NSAID's) arthritis medications for 7 days before surgery. An example of NSAID's includes Motrin (Advil), Naproxen (Aleve), Voltaren, etc. The use of these medications can interfere with blood clotting and prolong bleeding times. Stop taking Celebrex or Mobic three to four days before surgery. If you are on aspirin (ASA) for medical or cardiac reasons, please discuss with your cardiologist but, in general, stop taking aspirin or aspirin products five to seven days before surgery. Tylenol or acetaminophen products can be taken up to the night before your surgery. If you are on a steroid, such as Prednisone, you should continue to take this until the day of your surgery.

Exercise as much as you can tolerate prior to surgery. It makes your recovery better when you keep your muscles strong, improve endurance, and maintain the motion of your knee.

Avoid crash diets and eat a well-balanced diet.

If you smoke, you must stop smoking before surgery. Your family doctor or internist can help you with this. If you cannot stop smoking permanently, you must abstain for 14 days before surgery. It is essential to completely avoid smoking for at least two weeks after surgery. All hospitals and surgery centers are non-smoking areas. Smoking causes problems with wound healing and greatly increases infection and blood clotting risks.

Do not eat anything after midnight on the evening before your surgery. Do not eat anything the morning of your surgery. You will be asked to drink clear liquids until 2 hours prior to your surgery. If you are on certain blood pressure or heart medications, take them the morning of surgery.

Please bathe or shower the night before your surgery and use the foam soap and nasal solution as instructed. On the day of your surgery, do not take a shower but use the products as instructed. This will be discussed with you on your pre-operative appointment. Also, a hand out will be mailed to your home in the pre-op packet.

Wear loose, casual clothing. Do not wear makeup or jewelry to surgery. Get a good night's rest.

If you wear dentures, contact lenses or eyeglasses, you will be asked to remove them prior to your surgery.

Notify your surgeon if there is a change in your medical condition (cold, infection, fever, skin lesions or abrasions near the surgical site, etc.) prior to your surgery. It may be necessary to reschedule your surgery.

Please bring your insurance ID card(s).

PRE-OPERATIVE APPOINTMENT

Before your surgery, you will return to our office approximately 7-14 days prior to surgery for a pre-operative appointment with the nurse practitioner or physician assistant. This will include the following:

1. **A review of your past medical history and a complete list of your medications with exact dosages, and how often you take them. It is very important to complete the "PAST MEDICAL HISTORY" form that was mailed to you and bring it for the appointment. This information helps us manage your care.**
2. **Ensuring that your consents and questionnaire and consent forms provided in this packet are signed and collected by a team member.**
3. **A review of the operative risks and review of educational materials if requested.**
4. **A brief physical examination of your knee.**
5. **Confirming and finalizing the type of implants to be used in your surgery.**
6. **Ensuring that appropriate x-rays have been taken and are available prior to your surgery.**
7. **Discussing plans for discharge from the hospital or surgery center. You cannot go home alone. Someone must be with you for the first 3-4 days 24 hours a day.**
8. **Discussing the amount of weight bearing on your leg after surgery and your activity level.**
9. **Answering any last minute questions that you or your family might have.**
10. **Ensuring that you have been seen, or will be seen prior to surgery by the internist listed on your checklist for medical clearance. If we require that you be cleared by a specialist (cardiologist, hematologist, pulmonologist, nephrologist, etc.) this will need to be done prior to your visit. This will also be included on your checklist and a special clearance will have to be written by that physician and provided to us. If the special clearance is not done your surgery may be cancelled or postponed. This insures that your medical condition is optimized prior to surgery.**

DAY OF SURGERY

Prior to your admission to the hospital, the anesthesiologist should be calling you the night before surgery to discuss your medical condition and the types of anesthesia available to you. They will discuss with you the different types of anesthesia along with the risks and benefits of each. You will meet him or her prior to your surgery upon admission to the Pre-op Unit.

On the day of admission, you will report to the Registration Office on the First Floor of Hoag Orthopaedic Institute. After checking in at the admitting desk you will be shown where Pre-op Unit is located. Here, the nurses will make you comfortable, perform a brief history and physical examination, start an IV, and answers any questions. Your anesthesiologist will meet you at this time for a discussion of the types of anesthesia. Please feel free to question your anesthesiologist about all of the available methods of anesthesia. You will be given IV antibiotics. When the operating room is ready, you will be transported to the surgery area.

SURGERY

Prior to being taken back to the surgery area, an operating room nurse will greet you who is involved with your care. He or she will ask you several questions and then take you to the operating room where you will move to the operating table. This table works extremely well during surgery but is not the most comfortable piece of furniture you have ever been on!

You will notice a flurry of activity around you. While the anesthesiologist hangs IV's, places monitors on you, and prepares for the type of anesthetic you will receive, the nurses will be preparing the room for surgery. A great deal of equipment needs to be prepared for each procedure.

An Adductor Canal Block is recommended for partial knee replacements. It is used for post-operative pain management. It is done in the operating room by the anesthesiologist prior to the spinal or general anesthetic. This requires a needle stick in the thigh and the use of a nerve stimulator and/or ultrasound. Once the nerve is located, the area around the nerve is injected with local medication and a small catheter is placed by the nerve. This will be connected to a pump for home use. This will last 4-5 days after surgery. This medication helps to decrease the amount of post-operative pain. This does not take away all of the pain but can assist in pain management.

A general anesthetic will be used if at all possible. The actual decision of what type of anesthetic used is between you and the anesthesiologist.

For a partial knee replacement, you will be positioned on your back for the surgical procedure. When the surgery is completed, you will be transported to the Post Anesthesia Care Unit (PACU) or Recovery Room.

RECOVERY ROOM

In the Recovery Room, also known as the Post Anesthesia Care Unit (PACU), you will be closely monitored by highly trained intensive care nurses. Your surgeon will notify your family of your condition. Your pain should be under control; if it is not, bring this to the attention of your nurse. X-rays will be taken as necessary. Most likely, you will be breathing additional oxygen through a nasal tube. You will be in the PACU for several hours. Many patients require a longer stay but this is not necessarily a reason for concern. Visitors are allowed once the patient is stable.

A physical therapist will come to see you in the Recovery Room to make sure you are safe enough to get up and walk and get from the bed to a chair. You will be given a front wheel walker or crutches to use.

When you are stable and safe to go home, the Recovery Room nurse will discharge you home. It is very important to take it easy at home for the first 3-5 days and rest. Your activity level should consist of getting up to go to the bathroom and walking in the house. Please keep your knee and leg elevated as much as possible to reduce swelling and pain.

HOME HEALTH PHYSCIAL THERAPY

Home health physical therapy will begin the day following your surgery. Your therapist will teach you all necessary precautions to allow proper healing and functioning of your new joint. You will be taught exercises, transfer techniques (for getting in and out of bed), walking with a walker or crutches, stair climbing, and activities of daily living (i.e. dressing, bathing). You will need special equipment at home to help you with a safer and easier recovery. The crutches or walker will be provided by the hospital. A commode chair will be delivered to your home prior to your surgery. Most patients also benefit from a detachable showerhead and grab bar in the shower - both of which should be installed by you before surgery. Your therapists will progress your therapy and activities as you progress. They are available by telephone to answer any questions you may have once you are home.

WEIGHT BEARING RESTRICTIONS FOLLOWING KNEE REPLACEMENT

The partial knee replacement is cemented in place, you will usually be allowed to put as much weight as you can tolerate on the leg right away after surgery. This will help your increase your recovery. Most patients are able to ascend and descend stairs right away after surgery with assistance. Your home heath therapist will teach you this.

SUGGESTIONS

The following suggestions may help you at home or work to make it easier and safer.

1. **Whenever possible, use a high stool when at a counter.**
2. **Minimize carrying objects that compromise the grip on your walker or crutches. Use big pockets; slide objects along counters (especially pots and pans); and store objects where you will use them.**
3. **Do not bend down to pick up objects from the floor. Have someone bring objects up to a table or counter level for you so they will be easy to retrieve when needed.**
4. **Remove throw rugs to prevent tripping or slipping on them.**
5. **Have someone assist you to make clear open paths wherever you need to go. Rearranging furniture or temporarily storing unneeded items may make getting around much easier and safer.**

POST-OPERATIVE CARE

After you have gone home from the hospital, we will have you return to the office in 3-5 days for a dressing change. Please DO NOT let anyone take the dressing off. Keep the original dressings on from the hospital. The skin is usually closed with absorbable sutures and Dermabond Prineo Mesh. An occlusive dressing will be placed over the incision. The occlusive dressing can be removed 1 week after your surgery.

If you have a walk-in shower, you will be allowed to use it after your first post-operative visit. Water can flow over the incision occlusive bandage. This bandage will stay on for 1 week and then the incision can be left open to air.

You are not allowed to use a bathtub, pool, or Jacuzzi until your incision is completely healed and sealed with no scabs, open areas, or drainage. This increases your chances for post-operative wound infections, which could potentially involve the replaced joint.

At 6 weeks you will be seen for an incision check, examination, assessment of your ability to get along at home, and x-rays. You will also be given an instruction sheet from the office. New home exercises should be continued for at least six months post-operatively. Most patients will go to outpatient physical therapy.

Further follow-up visits will then occur at 3 months, 6 months, 1 year, and then every other year. The visits will include those items listed for the 6 week visit. X-rays are a vital part of the follow-up visit because they can sometimes show problems long before you feel that anything is wrong. Follow-up visits are also important for us to continue to define the best treatment for joint patients. So, we feel this is a necessary schedule for you to return to the office, even though you are doing well. However, if you are having problems, you can be seen sooner than your scheduled visit.

The surgeon will be in charge of follow-up visits. Other staff members who assist in total joint research will also see you. They will continue to monitor your treatments and your performance. We feel strongly that only through research and feedback can we improve your care.

We also ask that you see your regular Internal Medicine Physician or Primary Care Physician within 2 months from the date of your surgery. This visit will ensure that you are as physically fit as possible and allow you to maximize your recovery.

The post-operative follow-up visit schedule as outlined is for those patients progressing without problems. Should you have the need for more frequent follow-up, you may be asked to return at shorter intervals. Should you desire to schedule a visit for any reason whatsoever, you are always welcome.

PAIN

Even the events leading up to your surgery can be painful. There will be several needle sticks for blood and to start an IV. There will be a needle stick in your thigh for the Adductor Canal Block by the anesthesiologist. Once the anesthetic is given, you should experience no pain. Your upper body will be made as comfortable as possible prior to the general anesthetic.

Even though a partial knee is a smaller surgery than a total knee replacement, it still is major surgery. There is the potential for significant pain post-operatively. Please know that it is the primary goal of the physicians and nurses to keep you free from severe pain. Pain is very subjective and different for every patient. Many patients have minimal to no pain. Most patients have moderate pain. Should you experience severe pain that is poorly controlled with medication, notify our office right away. Pain medication will not take all of the pain away but it does take the edge off.

The potential for a great deal of pain is reduced by post-operative day 2. We recommend taking the pain pills on a regular basis for the first week or so. Your home health therapist can also help guide you through a schedule to take the pain pills. Most patients can also use anti-inflammatory agents such as Advil or Aleve to help control pain and swelling. Please feel free to discuss pain issues with any member of the joint team.

There is some pain further out after knee replacement surgery also. Some therapy will cause mild to moderate pain and swelling for some periods of time. If the pain persists, question the therapy or stop it.

Hopefully, all of the pain you experience will be tolerable.

Narcotics are discouraged before knee replacement surgery. It makes it very difficult to manage post-operative pain after surgery. Pain medication such as narcotics and non-steroidal anti-inflammatories are crucial to your recovery after knee replacement surgery. We do encourage their usage in the immediately post-operative period. Usually, patients have discontinued narcotic usage by 3 months after surgery. If pain is still an issue, a pain management specialist may be recommended.

PROBLEMS TO WATCH FOR AFTER SURGERY

Should the incision become red or angry looking, please call us. If you notice an increase in any type of drainage through the incision site or drain site, please call us. Should the area around the incision become more swollen and not respond to rest and elevation, please call us. If you have a fever over 102.5F that persists, please call us. A good rule of thumb is when in doubt, call us.

Blood clots can form in your calf or thigh. This is the most frequent complication after joint replacement surgery. Should you notice leg, ankle, or foot swelling that does not respond to rest and elevation; please call us. There is usually tenderness of the calf or inner thigh along with swelling. Redness in these areas is also sometimes seen.

It is normal to have swelling, warmth, stiffness, and sometimes color change of the knee after surgery. Generally, this gets better gradually over time. It often takes 12-18 months for this to fully resolve. Thank you for reading all the materials provided by our office.

CONCLUSION

The entire Joint Team is committed to the successful outcome of your surgery. We feel that our system works very well. Your surgery and recovery should proceed without problem. We have prepared this brochure and organized our team so that you, the patient, are an active participant. We ask that you maintain a positive mental outlook throughout the entire process. Studies have shown that optimistic patients recover more quickly and have a better surgical experience.

ACKNOWLEDGEMENT OF UNDERSTANDING

The Total Joint Team feels it is of utmost importance that YOU, the patient, be well informed before surgery. This has been shown to improve your results after the surgery. Therefore, we hold you responsible for the information in this manual and ask that you sign the statement below. Team members are available to answer your questions.

I have read this entire manual and understand its contents as well as the potential risks and benefits associated with my upcoming surgery. All of my questions have been answered.

Patient Signature _____ Date_____

Print Patient Name_____

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