TOTAL KNEE REPLACEMENT

Surgical Treatment for Advanced Pain due to Arthritis

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What is Arthritis? How do you treat Arthritis?

Arthritis is an inflammation of the joint due to loss of cartilage. Although there are a number of rheumatologic diseases most knee arthritis is due to osteoarthritis. There currently is no way to stop, slow down or reverse arthritis.

The diagnosis is made by taking a history of your symptoms and performing a physical examination. Plain weight bearing x-rays will be ordered (MRI's are not necessary to diagnose arthritis). Common features of arthritis on x-rays are bone spurs, narrowing of the joint space and cysts.Treatments for the symptoms of arthritis include:

1. Strengthening and exercise
2. Weight loss if indicated
3. Oral medications such as acetaminophen (Tylenol), ibuprofen (Motrin, Advil) or naproxsyn (Aleve)
4. Injections such as cortisone or viscosupplements may also help symptoms
5. Assisted devices such as a cane, crutch or walker
6. Some patients find braces to make their knee feel better but no brace will "fix" arthritis

When these treatments fail to relieve symptoms you may be a candidate for total knee replacement.

What is a Knee Replacement?

A knee replacement is essentially a resurfacing of the ends of the bone with metal and plastic. The top of the shin bone (tibia) is shaved flat and a metal plate is

fixed to the bone. Inside the metal plate a plastic insert is placed which functions as your new bearing, essentially the equivalent of your cartilage. The end of the thigh bone (femur) is prepared and a metal component in the shape of a letter "C" is attached to the end of the thigh bone. The last part of the operation is removing the bad cartilage from the back side of the knee cap (patella) and attaching a plastic "button."

All of the parts are cemented or glued in place with special orthopedic bone cement. There are press-fit or non-cemented knees available; however, those results have not been as successful as cemented knees.

What is a partial knee replacement and am I a candidate?

Partial knee replacements are just that – they only replace a part of the knee. Commonly the inside, or medial part of the knee is replaced. Another common partial knee replacement is a patellofemoral replacement which replaces only the knee cap (patella) and part of the thigh bone. I do perform these surgeries but only select patients with arthritis isolated to one part of the knee are candidates. Most partial knee replacements do not last as long as total knee replacements so it is not uncommon to need a revision to a total knee replacement latter in your life.

Are there any limitations after total knee replacement?

It is recommended to avoid high impact activities such as running and jogging or sports that require jumping as these place excessive load on your knee replacement and may cause pain and premature failure of the device. Many patients return to walking, hiking, golf, doubles tennis, bike riding. Many patients find they are able to return to activities such as snow skiing and surfing but these may place extra wear on the implant.

Kneeling after a knee replacement may cause pain or discomfort. Many people are able to return to kneeling for activities such as gardening but most need a pad

or soft surface to rest their knee on. Some patients find it difficult or painful to kneel after successful total knee replacements. Excessive kneeling should be avoided.

What complications could occur?

Any surgical procedure has risk, which is why it is important to try conservative treatment first, and consider surgery once you have failed conservative care. There are a number of complications that can occur but the percentage of patients that have a complication is quite small.

Complications that may occur after total knee replacement include infections, blood clots (in the leg or in the lung), bleeding, the need for a transfusion of blood, fractures of the bones, injuries to the blood vessels, nerves, ligaments or tendons, wound healing complications. Other potential complications could include heart attack, stroke, kidney failure, bladder infection or death.

Prior to surgery we evaluate each patient to assess your individual risk. Other risks may be addressed at the time of your visit based on your medical history. Those patients that have medical conditions that may increase any of these risks may be required to see their primary care doctor, have special tests or get certain medical conditions optimized prior to having a total knee replacement.

Will I need a reoperation or revision?

Total knee replacements can wear out or fail. Most total knee replacements should last for about 20 years. Around 20 years after the total knee is implanted 90% of total knees are still functioning well. Each year after 20 years approximately 2% may start to wear out per year. Routine follow-up will be scheduled to monitor your implant with x-rays to see if your knee is starting to wear out. One of the more common knee revisions is when the plastic bearing is exchanged for a new bearing. This is done when the bearing has worn out. When

the plastic bearing wears out the knee may be sore, painful or swollen and may start to feel unstable.

Other things that may occur that would require a revision would be an infection, a fracture, instability or loosening of the implant.

Prior to surgery

It may be necessary to see your primary care physician to obtain a "medical clearance" to proceed with surgery. If you have heart disease you may need to see your cardiologist. They will help determine if any special tests are required to make sure you are safe to have surgery.

You should have good oral hygiene. The mouth is a source of bacteria and could potentially lead to an infection in your replaced knee. It is important to brush and floss regularly. If you have cavities, severe gum disease, or other problems, these will need to be addressed and we will need a clearance from your dentist.

If you are overweight this can increase your risk of multiple complications after surgery such as infection, bleeding, wound complications, blood clots and implant failure. It may be necessary to reach a goal weight prior to your operation to minimize these risks.

If you are a smoker you will need to quit prior to having your knee replaced. Smoking can increase the risk of clots, infection and wound healing complications in addition to the other known health complications.

You do not need to go to physical therapy prior to surgery. No study has shown that PT before knee replacement (commonly called pre-hab) has made any major difference in the outcome. It would be beneficial to continue any low impact exercise that you have been doing such as walking, pool exercises or bicycle riding.

The Day of the surgery

When you arrive at the hospital you will meet one of our pre-operative nurses. They will assist you in getting into a hospital gown. They will get an IV started and check your vital signs. If needed, your knee will be shaved and prepped. You will also be given some pills (a pain pill, an anti-inflammatory pill and an anti-nausea pill). Taking the pills prior to surgery ensures that they will be in effect by the time you wake up.

I will also see you in the holding area. We will have a chance to talk and I will be able to answer any additional questions that you may have. I will also mark your knee with you while you are awake in the holding area.

You will also meet the Anesthesiologist. They will go over your medical history and anesthesia history with you and answer any questions that you have. Following that they will perform a nerve block. This has been found to be a great adjunct to general anesthesia to minimize the pain following knee replacement. The nerve block will block a good amount of the pain fibers in your leg for approximately 24 hours.

After the nerve block is placed you will be taken to the operating room where you will meet the rest of the team. Once you are under anesthesia a tourniquet is placed on your upper thigh. This is used during the operation to minimize any blood loss. Your leg is then sterilized with a cleaning solution. Next, I perform the operation. Once the operation is finished I place a dressing and wrap on your leg. You be awakened from anesthesia and taken to the recovery room.

After Surgery

You will be in the recovery room for approximately one hour while you recover from the anesthesia. The nurses in the recovery room will ice your knee and give any medications that are necessary. You may start having ice chips and crackers.

After that you will be taken to your room. You will meet the staff on the floor that will be taking care of you. You will have a light lunch that may consist of jello or broth. That afternoon therapy will come to see you.

Therapy on the day of surgery will consist of bed exercises to get your knee moving. Following that you will sit up and stand with the assistance of the therapist and a walker. If you are comfortable you can walk that afternoon with the therapist.

The following Day (Post-Op Day #1)

I will see you on rounds in the morning. We will check you laboratory studies to look at your blood count and kidney function. The dressing on your knee will be changed and I will inspect the incision.

You will have physical therapy twice that day. Therapy will consist of more bending and straightening exercises and walking. We have a stair model and the therapist will teach you how to go up and down the stairs safely.

If you meet all of your criteria you will be able to go home after therapy. You should be able to get in and out of bed by yourself, walk down the hallway with the walker, bend your knee to a minimum of ninety degrees and use the toilet. The majority of patients are able to go home the day after the operation.

Going Home

When you are cleared to be discharged you will meet with the case manager. Prior to leaving you will get instructions and any prescriptions that are needed. You may also receive or arrange for special equipment such as a walker.

A small percentage of patient have to go to a nursing home, sometime called a SNF (skilled nursing facility). Usually, the need to go to a nursing home is because of underlying medical conditions that require special care or treatment.

Follow-up Office Visits

You will have a follow up visit scheduled for approximately two weeks from the operation. At that visit most patients are walking with the walker some with a cane. You should have 90 – 100 degrees of bending. Most patients have stopped using narcotics and are using Tylenol and anti-inflammatories. However, if you need an additional pain prescription it can be picked up at this visit. We will check your wound, range of motion and the staples will be removed.

At your one month follow-up appointment your office visit will include x-rays of your new knee. Most patients are only using a cane, some may still need the walker and some have been able to stop using any assisted device. You should have almost complete extension (a straight knee) and over 100 degrees of flexion. Most patients have completed their home therapy and if needed you will get a prescription for outpatient therapy to be done somewhere near your home.

At 3 months you will have another follow-up visit, x-rays and an evaluation. Patients at three months are back to doing most things but may have some occasional achiness, soreness or swelling, especially after activity. It is okay at this point to go back to activities such as golf, tennis, hiking, etc. You will also get a prescription for antibiotics to use prior to dental appointments. I recommend this protection for life to decrease the risk of an infection in your total knee.

Pain Control

Pain control is a big concern for many patients. Although knee replacement is one of the more painful operations we do, advances in pain management over the past few years have may the experience much more tolerable.

If you have been using chronic narcotics before surgery it is important to cut back or stop using them before surgery. People will build up a tolerance to those drugs and it will make them less effective after surgery. Many studies have proven that

patients that use chronic narcotics have worse outcomes after joint replacement surgery.

We use a multi-modal pain management pathway. This is using different medications to block different types of pain, and to limit the amount of narcotics needed. Most of the medication side effects are due to the narcotics. The side effects of the narcotic pain pills may include constipation, itching, rashes, confusion and addiction.

Prior to surgery you will get a cocktail of a pain pill, anti-inflammatory pill, narcotic pain pill and an anti-nausea medication. You will also be given a nerve block by the Anesthesiologist. Blocking pain before it occurswill lessen the pain after surgery and make your recovery easier. After the operation is completed I also inject more numbing medicine into your knee.

In the hospital you will receive a few medications around the clock. These will be scheduled medications to keep your pain level at a manageable level. You will get extra-strength Tylenol three times a day. You will also receive anti-inflammatories (unless contra-indicated) twice a day. Another medicine will be given to desensitize your nerves. For breakthrough pain there will be additional narcotics ordered.

When you go home you will be taking Tylenol and an anti-inflammatory around the clock and you will be given a prescription for a narcotic. Your instructions at the time of discharge from the hospital will detail when, how much and for how long to take the medication.

Other common questions that patients have after surgery

After surgery it is common for your replaced knee to feel warm. You may notice your new knee will feel warmer than your other knee for up to one to two years. An incision is unavoidable to perform a knee replacement. The incision may injure some of the small nerves in the skin over the front of the knee. This will leave a small patch of skin on the outside of your knee that will feel numb or lack

feeling. Over time the area should get smaller and feel less numb. It is also common to hear or feel clicking inside your new knee. The click occurs when the metal touches the plastic and this may be more noticeable early on when you knee is swollen.

Pick a coach!

Find someone you trust and get along with. This person may be a spouse, family member or friend. This person should come to all pre-op and post-op visits with you. They are you extra set of eyes and ears. They will help you with your recovery and make sure that you complete your physical therapy, meet your goals and make it to your appointments.

This is only a brief overview of the process. You will have time to discuss the surgery, risks, benefits and complications prior to your operation. Some things may be added, changed or modified based on your medical history.

I have read this document and understand its contents and accept the risks and conditions associated with surgery.

_____	_____	_____
Print Name	Signature	Date