

TOTAL KNEE ARTHROPLASTY OUTPATIENT – TOURNIQUETLESS

The key to total knee arthroplasty is to be prepared to dedicate yourself to the post-operative course that will best ensure a good outcome. THE main determinate of a good outcome is regaining range of motion (ROM). To put it simply, get your knee straight and get it bent. More on that later. I am a firm believer in the fact that if you can go home from the hospital, you should go home. National studies show that infection rates go up the longer one stays in a hospital. The goal during your hospitalization after your surgery will be to make sure that you're mobile enough to be safe to function on your own. Therefore, after a total knee replacement, patients typically go home on the day of surgery or postoperative day 1. In circumstances where patients prefer a skilled nursing facility they may have to stay three days.

I would like to walk you through the time line of what occurs before surgery, during surgery, and after surgery when it comes to a total knee replacement.

Obviously, we first need to start with the decision that a total knee replacement is right for you. I try to be very careful about who is best suited for a total knee replacement and will discuss with you the treatment options for knee arthritis. Once you and I have decided to proceed with surgery, you will talk to my medical assistant, Darcie, about scheduling your procedure and be sent for medical clearance from a primary care physician. You will then come back to see my Physician's Assistant, Jamie, for a pre-operative history and physical and to make sure that all of our clearance questions have been answered. During this time, you will also go through a Joint Camp which will walk you through what will happen during and after your hospital stay. Often, patients don't realize what questions they will have when they first meet me but the process will enable you to ask more questions as they come to you. During this time, your post-operative care will be tailored to what's best for you.

During your visit with Jamie, you will be given instruction on the use of Bactroban (Mupirocin) intranasally to prophylax against infection with MRSA. Also, you will be given bathing instructions for the same reason.

I do most of my total joints on Mondays but can be a little bit flexible. I like to try to get all my patients out of the hospital certainly before the weekend. Incredibly, not many insurance companies seem to work on the weekend despite the fact that the rest of the world does. Therefore, getting approval for some post-operative care decisions happens much better during the week.

The night before surgery drink 1 liter of G2 Gatorade before going to bed. Good hydration is extremely important.

DAY OF SURGERY

You will be instructed on when to arrive on the day of surgery. If your surgery is not the first case, then the exact start time is really just an estimate. So, please don't get too frustrated if your start time is later than what is written down on your information sheet. You will arrive at the hospital and go to the outpatient surgery suite where a nurse will greet you and start the ubiquitous paperwork that is unfortunately necessary. You will be asked many times which knee will be operated on. Don't be concerned by this. You will then proceed to the holding area where you will meet your anesthesia provider.

Which anesthesia you receive for this procedure is extremely important in your short term and I believe your long term outcome. I much prefer spinal anesthesia and I feel it is essential to your pain control. Most people wish to go to sleep as well and you are welcome to do that. The beauty of a spinal is that when they do put you to sleep the anesthesiologist doesn't have to give you near the amount of narcotics and therefore you're much less likely to wake up nauseated and having such complications as urinary retention and confusion which can go along with use of narcotics. If you would like to stay awake and talk to me during surgery that is fine too. The downside to staying awake is that you will be subjected to my music (classic rock, 60s, early 70s), along with drills and hammering. Spinal anesthesia allows you to awake from surgery with no pain. As your feeling returns, you will be more awake and better able to deal with your pain more rationally. If you are put to sleep without a spinal then all your pain will come on as soon as you wake up. I have found that patients don't deal with that situation near as well. Thus, long term outcomes are affected.

In the holding area I will mark your knee, you will meet your anesthesiologist and O.R. nurse. You will then receive your anesthesia, get situated on the bed, get sterilely prepped and draped, and we will begin your procedure.

I usually make an incision that curves around the knee cap slightly that I think causes less pain than incisions that go straight over the knee cap. In most cases, I do not cut any muscle, but lift the muscle and the knee cap over the knee (subvastus approach). In some knees this is less desirable and I will do a traditional quadriceps splitting approach. Prior to closure I will do an adductor canal block which will also help with postoperative pain. After the surgery is finished, I will close your skin with glue (no staples are used). This takes a little more time due to the multiple sutures I have to put underneath the skin. You will also have at least one drain coming out of your knee which will be taken out within a day or two.

In the recovery room, because of the spinal, you will probably feel no pain. You will not have a dressing on your knee secondary to the surgical glue. You will have ice put on your knee to help manage pain and inflammation.

Once you are stable, you will be transferred to the orthopedic unit. There you will meet your orthopedic nurse coordinator that you most likely met prior to surgery during Joint Camp. Pain control measures usually consist of:

1. Tramadol every 6 hours scheduled.
2. Ice on the knee for 24 hours at least and then at least three times a day thereafter.
3. Narcotic pills by mouth given as needed. You can usually have 1 or 2 pills every 4-6 hours. IV

narcotic administration will be used if the above measures are not adequate.

4. Exparel – This is an injectable numbing medicine I put in your knee which lasts 72-96 hours.

It's not 100% effective but makes a big difference.

I no longer use continuous passive motion (CPM) machines to get your knee moving. My experience, which is corroborated by many other physicians, is that they are completely useless and do not improve your outcome in the long run. I have used them for several years and no longer use them at all. I find

that patients hurt less without them and probably get a little bit better range of motion without them as well.

The goal of physical therapy on the day of or the day after surgery is to make sure you are safe to be discharged. Several patients are able to go home on the day of surgery. Most others go home the next day.

Skilled nursing facility rehab units are an excellent option for those who either live alone or are in a situation or age where they would prefer to not go straight home. In that circumstance patient's typically stay three nights post-operatively and then are transferred to the skilled nursing facility which you and I have chosen pre-operatively. You are certainly welcome to go to any facility that you wish but there will be certain ones that I recommend and am pretty particular about.

You will follow up with Jamie to check your range of motion at three weeks and then see me most likely six weeks after discharge from hospital. Certainly if there are any concerns during those six weeks you can come see Jamie or I at any time.

Remember that the main goal of therapy is to get your knee straight and to get it bent at least past 90 degrees but most people get it bent into the 115-120 degree range. You can work on your extension by resting your heel on a chair for 30 minutes three times a day or on two pillows on your bed and let gravity pull it down straight. It's easier to get this early on. Don't sit in a recliner while doing this. A recliner keeps your knee partially bent and that is not a good thing. Also, don't rest with a pillow under your knee. In this way, even if you're in bed you can be doing therapy by having your foot propped up and allowing your knee to fall out straight. Flexion can be achieved by planting your foot on the floor and scooting forward in your chair ever so slightly every time a commercial comes on. Again, gravity does the work for you.

- Knee Extension: <https://youtu.be/H5DEG6CA8pY>
- Knee Flexion: <https://youtu.be/l4xXpBmDmMw>

Wound care

Your drain will be pulled prior to discharge. Bleeding through the wound or from the drain site is not abnormal the first day or so after surgery. You are welcome to shower on post-operative day number one and let soap and water run over your wound. Do not put any ointment on your wound as this will tend to detach the glue from your skin. You will be given most likely Lovenox as an injection to help prevent blood clots. Sometimes Lovenox can make your wounds weep. If this occurs, stop using the Lovenox for at least 24 hours and call us. Aspirin is an option.

Things to be concerned about/watch out for

1. Blood clots – Blood clots can kill so we understandably take these very seriously. That would not only ruin your day but mine as well! Signs of a blood clot can include tightness in your calf (either one). If this occurs, notify us and we will order an ultrasound to rule this out. It is better to order the test and it be negative than to not order it and miss a clot. If a blood clot goes to your lungs (you don't have to have the symptoms in your calf) you may experience shortness of breath, extreme fatigue, or just "feel different". These symptoms are due to lack of oxygen and

are an emergency! Go to the ER! You will be given most likely Lovenox (Enoxaparin) on the date of discharge and be told when to start it and how to use it. Some patients and doctors prefer aspirin which is certainly cheaper than Lovenox. Please let me know if you wish to use aspirin instead. If you are on Coumadin pre-operatively, it will most likely be stopped before surgery and we will restart it on the day of surgery itself. Please let me know if you have a history of blood clots in your family. After you are discharged, be sure not to be waited on too much. Get up and get the blood flowing.

2. Infection – Expect some redness around the wound. I have found since I started using glue to shut these wounds I have much less skin irritation than I was getting with staples and therefore less redness around the wound. Also, most fevers immediately after surgery are due to lung problems so USE THE INCENTIVE SPIROMETER at your bedside at least as often as a commercial comes on until you are up and around more. Fevers once you are at home are concerning – let us know about them.
3. **Lack of progress in range of motion – Jamie will most likely examine you at three weeks post-operatively. If you do not flex to or past 90 degrees by week four I will probably put you to sleep at the hospital and bend your knee to break through the scar tissue that has developed. No, this isn't as bad as it seems. This manipulation under anesthesia will not improve your extension; you have to get that on your own.**

Pain and Swelling

This occurs for weeks after surgery, sometimes months. Don't be concerned, everyone is different.

Assistive Walking Devices

You will first be on a walker. You and your therapist will decide when to come off of it. There is no set time. You may or may not go to a cane. There are no wheelchairs after surgery; after all, what would be the point of surgery if you used a wheelchair afterwards?

Dental Work

I prefer my patients take an antibiotic before and after dental work for the rest of their lives. Just one pill before and one after. If your dentist doesn't give an antibiotic beforehand, we will. Call us. If you have any cavities, it is best to get those taken care of pre-operatively. I would avoid any major dental work post-operatively if you can until your swelling has subsided or after six weeks, whichever is later.

Driving

You can't drive and be on pain medicine. If you had your left knee operated on then drive as soon as you are not taking narcotics. Otherwise, you, your therapist and your family can decide when it is best for you to drive again.

Airplanes

Security may or may not pick up your metal joint. It depends on how sensitive their equipment is. A card that says you have a joint replacement doesn't help. Good luck on avoiding a strip search!

Motorcycles/Four Wheelers

Never! They are bad for you and orthopedic surgeons hate them.

Exercise

Most people don't jog on total knee replacements. An exercise where your foot is connected to something typically is better. An example of this would be a stationary bike. I have had some patients play tennis on total knee replacements but that is not common. I think you're just going to have to see what you are capable of doing on it. (Snow Skiing is absolutely doable.)

I enjoy doing total knee replacements and the vast majority of patients do extremely well. We have worked hard to minimize risks and maximize outcomes while making the whole experience as enjoyable as possible. I truly think I have the most fun job in the world and this is one of the reasons why!

Stephen G. Littlejohn, M.D.