

# **Discharge Instruction Packet for Knee Replacement Surgery**

**IMPORTANT PLEASE READ CAREFULLY**

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## Pre-operative Knee Replacement Instructions

### Appointments:

- Primary Care appointment for medical clearance for surgery, should be done 2-3 weeks prior to surgery.
- Medical specialist (Cardiologist or Pulmonologist) appointment for medical clearance for surgery, should be done 2-3 weeks prior to surgery.
- The Joint Replacement Education Class should be done 1-2 weeks prior to surgery.
- Blood work needs to be done 2-3 weeks before surgery.
- Cryoablation nerve blocks should be done 1-3 weeks prior to surgery at the surgical center. These are recommended as they have been proven to help reduce pain for up to 3 months after surgery.
- Pre-operative appointment with Dr. Thoms 1-2 weeks before surgery.
- After surgery visits: you will have 2 pre-scheduled visits at 2 weeks (with Dr. Thoms) and 2 months (with PA Austin Renaud) after surgery. There may be additional visits after surgery for a range of motion check, if necessary.
- Physical Therapy: the home therapy group typically calls a few days prior to surgery to introduce themselves and discuss the home layout.

### Medications:

- The week prior to surgery, you must stop all anti-inflammatory medications (NSAIDs), vitamins, supplements, fish oil, homeopathic, and naturopathic medications. Aspirin is safe to keep taking in order to protect your heart.
- Diabetic medications should be stopped 24 hours prior to surgery, except for insulin. Insulin dose will be adjusted by your medical doctor or endocrinologist.
- If you take a blood thinner, this will be addressed at the pre-operative visit by Dr. Thoms
- Your medication list will be reviewed by Dr. Thoms at the pre-operative visit, and any specific instructions given at that time. It is **VITAL** that your medication list be up to date with Dr. Thoms, otherwise proper instructions cannot be given.

## Post-operative Knee Replacement Instructions

You have just undergone either a partial or a complete knee replacement. This set of instructions will guide you for the next 2 or 3 months. I will outline my expectations as well as what is considered normal.

### Bandage Care:

- You have a bandage covering your knee. This was placed in a sterile fashion over the incision at the end of surgery. In order to decrease the risk of infection, **THIS IS TO REMAIN IN PLACE.**
- I will remove the bandage when you are seen in the office for your 2 week post-surgical visit. There are no staples or stitches that will need to be removed. The skin is sealed with a “skin glue” to allow for improved healing and reduced infection risk.
- You are allowed to shower beginning after the On-Q pump has been removed (or 48 hours after surgery if it was done at the surgery center)—the bandage is not fully waterproof, and will need a plastic wrap for the shower.
- If you attend a rehabilitation unit after your hospital stay, the nurses are instructed to leave the bandage in place. Not all nurses understand this however, so please make it your responsibility to prevent them from changing your bandage.
- If your surgery was done at the hospital, you will have an On-Q pump (a ball filled with numbing medication that injects automatically through a catheter in your thigh). A small amount of leakage at the catheter site is typical, as it is like a soaker hose that is under pressure.

- The On-Q pump will be placed to assist with pain over the front of your knee. It typically lasts for 3-4 days. Once all medication has been used (the ball has shrunk down to a prune), you may remove the On-Q pump and place a bandage on the puncture site on your thigh.
- If your surgery was done at the surgical center, you will not need the On-Q pump since you will have had a nerve block done with a long acting medication, which typically lasts for 2-4 days after surgery.

### **Medications:**

- After surgery you are to resume all of your normal medications. If you normally take aspirin, this will be started after surgery and you are to continue taking this as part of your normal medication schedule.
- You will take blood thinning medication (Eliquis, Xarelto) starting on \_\_\_\_\_ in the evening after surgery. You will take this for 4 weeks.
- Pain management consists of ice, stretching, elevation, and medications. There will be pain, and that is normal. The goal is to avoid extreme levels of pain.
- Tylenol (acetaminophen) is a safe over the counter mild pain reliever that can be taken every 6 hours. Maximum recommended dose is 3000 mg/24 hours. The dose/size of the pill varies by manufacturer, so please take according to instructions on the bottle.
- Anti-inflammatory medication (Celebrex, Ibuprofen, Naprosyn, or Meloxicam) is to be taken two times per day for 4 weeks after surgery, and then on an as-needed basis.
- Muscle relaxants (Diazepam/Valium, Baclofen) can be taken every 8 hours as needed for muscle tension/pain/spasms. It can be very helpful for therapy and stretching.

- Narcotic medications (Oxycodone, Percocet, or Vicodin) may be taken for up to 4 weeks after surgery, if necessary. Addiction to narcotics is always a concern, and narcotic medication prescriptions are closely monitored at the state and federal levels. Narcotics should **NEVER** be taken to “stay ahead of the pain” as that will create addiction. They should only be taken when you have extreme pain. The goal is to minimize pain in order to allow for improved participation with physical therapy.
- Constipation may be treated with over-the-counter laxatives such as Miralax, Enulose, Milk of Magnesia, or Magnesium citrate. I recommend starting Metamucil or senna and Colace prior to surgery.
- Zofran (Ondastrenon) can be taken as needed to help with nausea

### **Physical Therapy:**

- I expect all of my patients to perform **A MINIMUM OF 3 HOURS OF THERAPY EVERY DAY** for 2 months after surgery. This should be divided into 20-30 minute sessions performed 6 to 9 times throughout the day.
- Therapy will focus on range of motion—extension and flexion. **WALKING IS NOT CONSIDERED THERAPY.** I expect 3 hours per day in addition to time spent with the visiting home therapist or at the therapy office.
- Therapy will progress over 2 or 3 months from focusing on range of motion toward strengthening and improved gait. See the last page for exercises to be done.
- You should have knee extension of 0-8° and flexion of 90-100° by 2 weeks after surgery.
- The expected motion of your knee by 3-4 months after surgery is extension of 0-5° and flexion of 115-125°.

- Patients with extreme limitations in motion prior to surgery due to scar tissue, prior surgery, or severe arthritis may have difficulty achieving this amount of motion due to muscle or ligament contractures.

### **Medical Equipment:**

- Ice machine: use for at least 2 weeks to reduce swelling. Take care to avoid frostbite.
- Sequential compression devices: these should be worn for 2 weeks to prevent blood clot and reduce swelling
- Elevated toilet seat: useful for the first week or so until you have achieved proper strength and mobility in the knee.
- Walker
- Cane

### **What is “Normal”**

- Swelling is normal, and will last for 2-3 months after surgery. Some people swell more than others. The swelling will gradually improve as you heal and perform therapy.

- Bruising is normal and may extend up to your thigh and down to your toes. This will gradually improve.
- Low-grade temperatures (up to 100.4°F), sweats, and chills are common after surgery. Some of these symptoms may be related to the bruising, some may be due to the narcotic pain medication. It gradually improves as you heal and need less medication. Tylenol may be taken to help with any of these symptoms.
- Pain is expected, and can be severe. Pain medication should be used to control the pain and allow for improved participation in physical therapy. Pain should gradually reduce over 2-3 months from surgery.
- Aching is normal. As the ligaments, tendons, and muscles heal from the surgery this will decrease. It typically takes 4 months for this to resolve.
- Total healing time is usually 4-6 months from surgery.

**What is “Not Normal”: please contact my office if any of these symptoms are present (860-889-7345)**

- Fevers over 100.7°F.
- Severe pain that is not controlled with pain medication.
- Drainage from the bandage that soaks through the bandage.
- Chest pain.
- Shortness of breath.

## Basic Instructions/Advice for Care Givers

### Pain Control

- Pain is expected. Be prepared, because it can get ugly.
- Things that can help: Ice, elevation, progressive stretching/therapy throughout the day. Then more ice and elevation. And more ice and elevation. And more ice and elevation. (Hopefully you get the picture now).
- Things that have been shown to be worse: taking pain medication before there is pain (this can cause addiction). Pain medications should only be taken **AS NEEDED**, and only when there is actually severe pain. The concept of “staying ahead of the pain” is part of the fallacy that can lead to addiction.
- Tylenol, anti-inflammatories, and muscle relaxers can all be taken on a “scheduled” basis. This means taking them on a set schedule based on the instructions on the bottle and on page 4 of this handout.
- “Rome wasn’t built in a day.” The same goes for knee replacements. This is a marathon, not a sprint.
- Therapy: this is the worst part, and at times requires a “bad cop” mentality. Some patients are able to manage this on their own, but some need the “bad cop” to step in and push them. It may be best if therapy time slots are scheduled throughout the day as part of a routine. Sometimes setting the alarm on a phone or a timer can help with this.

### When to call: please see page 6 of this handout

- Medication refills (please call at least 2-3 days before you run out)
- My personal cell phone is 646-942-2274. This is for text messages only, and please use at appropriate times (daylight hours please). I will not pick up any actual phone calls.
- Typically, emergency calls happen at night because things have been getting progressively worse through the day. I would rather deal with smaller issues during the day than an emergency at night.



- For emergencies overnight, please use the office number, and the call center will direct you to the on-call provider.

## Prevention of Problems

### ➤ Swelling.

- It happens. It is expected.
- It is not a problem and will go down over the course of 2 months if you ice and elevate.
- If you do not ice and elevate, it can become severe and lead to water blisters. Please avoid this.

### ➤ Dehydration.

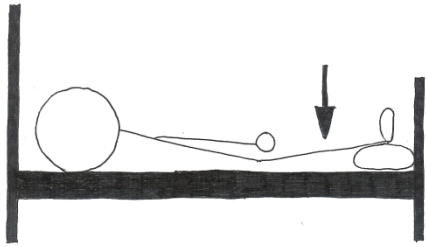
- This can lead to dizziness. In more severe cases, the patient can “pass out”
- It is very important to make sure that the patient drinks fluids throughout the day (typically much more than they want to drink).
- If they get dizzy, put them in bed immediately and make them drink large amounts of water.
- If they do “pass out”, sometimes the patient will twitch or spasm. This can appear quite frightening, but it is normal. Just lay them down, put their feet up, and get fluids into the patient once they wake up again.

### ➤ Alcohol.

- If the patient typically drinks alcohol, please do not change the routine.
- If the patient develops confusion, hallucinations, or tremors it could be due to withdrawal. Let them have a normal amount of alcohol and take a valium. If it persists, call the office.

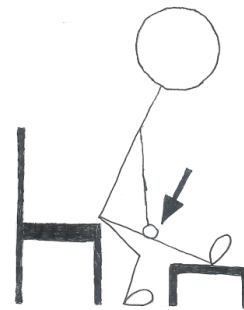
## Physical Therapy after Knee Replacement Surgery:

### Extension Exercises:



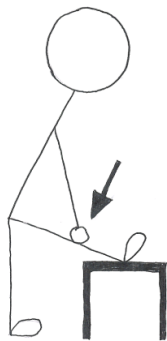
Lying in bed, put pillow under

Sitting in chair, rest foot on ottoman and let leg relax into full extension  
May also work on Quad strengthening, pushing down with quad exercises.

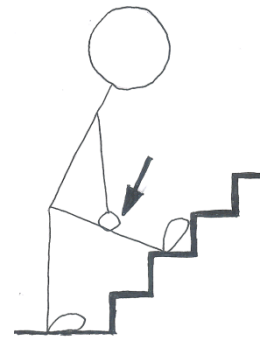


heel

or foot stool. Apply pressure over top of knee with hands—forcing the knee into full extension.

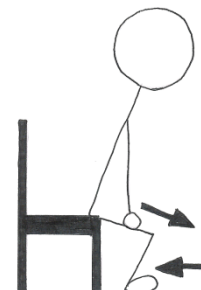
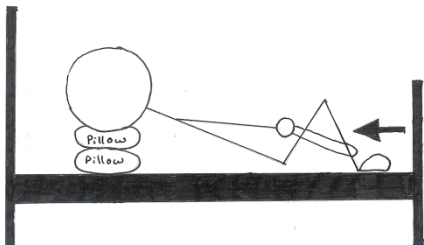


Standing, put heel on stool or stairs and put knee with hands—forcing the knee into full extension



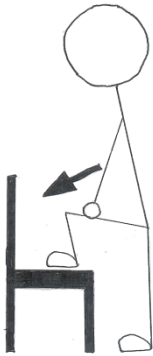
pressure over

### Flexion Exercises:



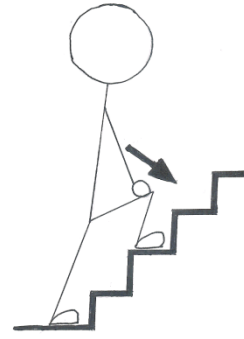
Lying in bed, place sheet or towel around ankle and gently pull ankle toward buttocks

Sitting in chair, gently rock back and forth, inching foot further under chair and moving buttocks toward edge



putting

Standing, put heel on stool or stairs and lean downward pressure on knee



forward while

## Phase I Exercises for Total Joint Replacements

These exercises are to strengthen muscles and increase range of motion in your joints. These exercises should not produce exhaustion, or pain that is lasting. Do the exercises slowly and smoothly, **without** holding your breath.

1. **Hamstring Stretch:** Sit on a chair and place the heel of your **affected** leg on another chair or stool of equal height. Relax the knee as much as possible and allow gravity to pull your knee straight. Remain in this position to fatigue. When this becomes easy, you may lean forward from the hips to increase the stretch. Repeat throughout the day as tolerated.



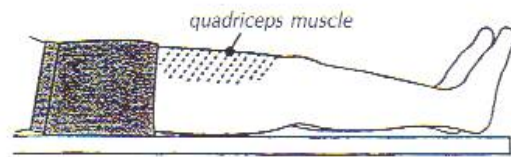
2. **Quadriceps Stretch:** Sit on a chair so that your feet slightly touch the floor. Place a towel roll under your **affected** leg. Allow the knee to relax, and then bend it as far back towards the chair as possible. Hold for 5 seconds, and then relax. Repeat throughout the day.



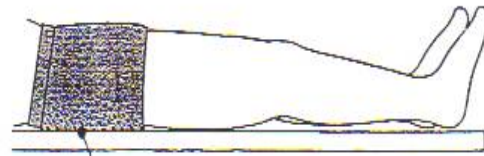
3. **Ankle Pumps:** Move your feet up and down at the ankle to stretch your calf muscles and promote leg circulation. Repeat up to 100 times per day.



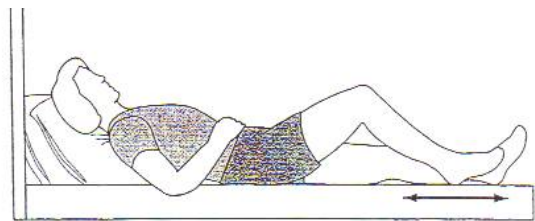
4. **Quadriceps Exercise (Knee Tighteners):** Lay on your back with your legs straight, push the back of your knee into the bed, tightening the muscle on the front of the thigh. Hold for 5 seconds and then relax. Repeat up to 100 times per day.



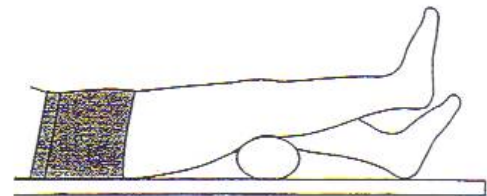
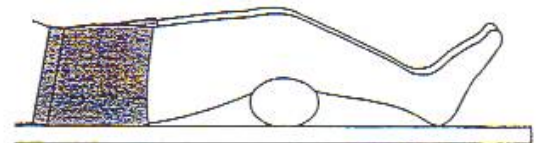
5. **Gluteal Isometric Contractions (Buttock Tighteners):** Squeeze your buttocks together. Hold for five seconds. Relax. Repeat up to 100 times a day. This exercise can also be done while sitting or standing.



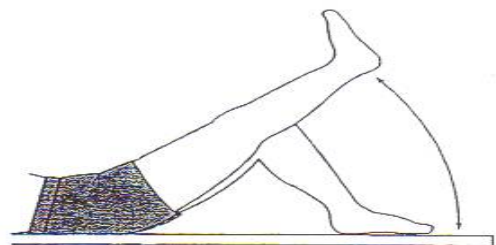
6. **Heel Slide:** Lie on your back. Slide the heel of your affected leg up toward your buttocks, bending your knee while keeping your knee pointed toward the ceiling. Slowly return to the starting position. Repeat 25 times.



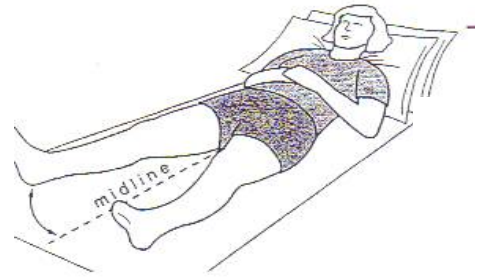
7. **Short Arc Quads:** Lie on your back with a towel or blanket roll under your knees. Rest the weight of the thigh on the roll. Lift the heel off the mat, straightening the knee. Do not lift your knee off the towel roll. Hold your leg straight for 5 seconds, and then slowly lower your foot. Repeat 25 times.



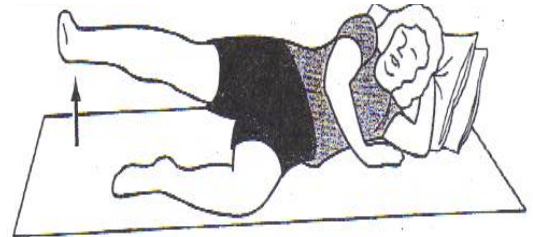
8. **Straight Leg Raise:** Lie on your back with your right leg bent at the knee. Tighten your left knee and thigh and lift your leg off the bed. Hold for 3 seconds. When lowering the leg, try to keep the leg straight, so that the back of the knee touches the bed before the heel does. Alternate legs. Repeat 10 times.



9. **Hip Abduction:** Slide your **affected** leg out to the side, keeping your toes pointed up and your knee straight. Then slide your leg back, being careful not to bring your leg past the midline of your body. Repeat 25 times. You may progress to doing this exercise while standing



10. **Hip Abduction (side lying):** Lie on your **unaffected** side with your body slightly turned toward your stomach, and the leg slightly bent at the knee for support. Lift the **affected** leg towards the ceiling, keeping your leg in line with your body. Hold 5 seconds. Repeat 15 times.



11. **Hip Extension (Standing):** Stand holding on to counter or walker for support. While keeping **affected** leg straight, begin leg backwards as shown. Repeat 25 times.



12. **Knee Flexion (Standing):** Stand holding on to counter or walker for support. Bend **affected** knee as shown. Repeat 25 times.

