GENESIS ORTHOPEDICS & SPORTS MEDICINE

Jonathan Wang, MD

Total Knee Arthroplasty

Discharge Instructions-

Comfort

- Discomfort increases 1-2 days after surgery due to the nerve block wearing off (if a nerve block was performed). This can be helped by oral pain medication. It is safe and normal.
- **Cold therapy** – This will greatly reduce pain and will help with swelling for the first 3-5 days after surgery, as well as following PT sessions
    - Some patients may be provided an ice machine to go home with
        - This is dependent on the type of surgery you had and insurance approval
        - If you were not provided with an ice machine, regular ice pack/ bag of ice can be used
    - You may use ice 20 minutes on, 20 minutes off, as often as you wish
    - Always keep a cloth barrier, such as a towel, between the cold and your skin

Medications

Your post op medications were sent to the pharmacy we have on file prior to surgery

- Please reach out to our office if you need a refill of your medication, preferably, 24 hours prior to your last dose to allow time to fill

1. Aspirin 81 mg: For anticoagulation to help prevent blood clots

- You must take one 81mg aspirin twicea day for 4 weeks. Do not take aspirin if you are <19yo

2. Celebrex 200 mg: For antiinflammation to help pain and swelling

- Take twice a day as tolerated for post-op inflammation

**** Ok to substitute for other NSAID- Ibuprofen 600 mg twice a day can be used instead****

3. Zofran (Ondansetron) 8 mg: For nausea – It is common to experience nausea from anesthesia and/ or pain medication in the first few days post op

- You can take 1 tablet every 8 hours as needed for nausea
- It is a dissolving tablet that is to be placed on your tongue – allow it to dissolve, and swallow

4. Oxycodone 5 mg: For pain – This is a narcotic medication for pain, to be taken AS NEEDED

- Take 1-2 tablets every 4-6 hours as needed
- After 1-3 days, you can begin to space out the dosing/ discontinue the medication, transitioning to a step-down regimen of Tylenol and ibuprofen as soon as pain allows
- Common side effects such constipation, nausea, and cognitive impairment may occur
- It is very common to use the pain medication only at night to help sleep better or around the time of therapy so you can participate more comfortably

5. **Tylenol 1000 mg:**

- Take 1000 mg every 8 hours

6. Pregabalin 75 mg: for prevention of neuropathic post operative pain
- Take one tablet daily

7. Famotidine 20 mg: for prevention of heartburn/ acid indigestion while taking NSAIDs
- Take one tablet twice daily while taking NSAIDs (ie: Celebrex, Ibuprofen, Meloxicam, etc)

Other medications:
- For constipation – over the counter remedies such as Colace (Docusate Sodium) or Miralax as needed
  - Both the anesthesia and the pain medication can cause constipation

Activity

- Full weight bearing as tolerated. We encourage you to walk, stand, climb stairs, and perform physical therapy exercises as often as you can tolerate to improve the range of motion to your knee.
  - Please alternate activity with RICE (rest, ice, compression and elevation).
  - We would also suggest ankle pumps and circles when seated/laying for any period of time to help lower extremity circulation.
  - Do not sit for more than 30-45 minutes at one time.
- You may use a walker, cane or crutches depending on your comfort level until you feel more stable and the pain improves.
  - These devices are designed to help you feel more secure.
  - Be careful of transitions in home or at rehab between carpet and wood floors as sometimes the assistive device will catch at the transition point.
- There will be aching, swelling and limited motion for the first few weeks in particular. While pain can be controlled, unfortunately it cannot be removed completely.
  - With this in mind, we encourage you to be as active as able despite the pain because it will help in the long-term.
- Driving -- If your procedure was on the right side, we typically see you fit to drive between 4-6 weeks - this is in large part due to delayed reflexes. Physical therapy will help us determine when you are ready. If your procedure was done on the left side, you may be able to drive earlier if your pain is controlled.
  - At a minimum, no driving until you have stopped taking the narcotic.
  - Please bear in mind we want you to be safe and comfortable when you return to driving - this is a sliding scale depending on your progress.

Wound Care

The bandages were applied under sterile conditions in the OR, and we want to avoid bacteria near the incision

- Your incision is covered by a rectangular waterproof bandage. Leave this in place until your first appointment with us in the office.
  - You may shower with the bandage in place, though avoid soaking in a bath or pool.
- Please watch for drainage on the white portion of the bandage. If more than 25% of the bandage is covered by drainage, please call our office. Do not remove the bandage.
  - It was applied under sterile conditions in the OR and we do not want bacteria near the incision.
- It is OK to remove the ACE wrap and the cotton dressing if they feel too tight or to apply ice more

directly to the knee. It is a good idea to rewrap the ACE, starting from the foot and going up to the knee, to provide light compression and to prevent swelling the first week.

- If you notice more than 25% of the bandage has become saturated with drainage, or if you have any concerns about the incision (redness, draining, swelling, pain), **you can call us and send us a picture of the incision (630)-377-1188 [Press 2 to leave a voicemail]**

Diet

- You may eat anything you like, but it's advisable to choose light, easily digestible foods and to drink plenty of water the day after surgery to avoid any nausea/ upset stomach

When to call your physician

If you require immediate attention, or feel that you are having a medical emergency please go to the emergency department for urgent work up

- You develop a temperature over 100.3° F degrees
- You have any drainage at the incision site 5 days or later after surgery
- The surgical area becomes hot to the touch, red, intolerably painful, or swells suddenly. (Note- some warmth, pain, and swelling are normal)
- You have persistent pain and / or swelling in your calf.
- You have any additional questions or concerns. We are happy to talk to you at any time!

Important contact information

Physician's office phone # (630)-377-1188 [Press 2 to leave a voicemail]

Please note- We are either in clinic or surgery and not answering calls in real time – Please leave a detailed message with our clinical voicemail line and we will return all voicemails within one business day. Additionally, the call center can connect you to the PA on call, however, please reserve this option for urgent inquiries only

Oak Brook- 2425 W. 22nd St. Suite 207A Oak Brook, IL 60523 P: (630) 377-1188 F: (630) 377-7360
Little Village- 2859 S. Pulaski Rd. Chicago, IL 60623 P:(630) 377-1188 F: (630) 377-7360
St. Charles- 2900 Foxfield Rd. Suite 102 St. Charles, IL 60179 P: (630) 377-1188 F: (630) 377-7360

Recovery milestones:

PT will be 3x per week for the first 2-3 months, but you must do your exercises DAILY

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Overview:

- Week 2 – Flex knee to at least 90 degrees
- Week 4 – Flex knee to at least 110 degrees. Extend knee fully. Dispense with walker
- Week 6 – Flex knee to at least 115 degrees. Rebuild strength. ¼ front lunges
- Week 8 – Rebuild strength. Full front lunges. ½ squats
- Week 12 – Begin cardiovascular conditioning program. Continue to improve strength

Physical Therapy Protocol

The following instructions are intended for your physical therapist and should be brought to your first physical therapy visit, which should occur 1-2 days after the day of surgery.

PHASE 1: 1-10 DAYS POST-SURGERY

Goals: Active quadriceps muscle contraction, safe (isometric control) independent ambulation, passive knee extension to 0 degrees, knee flexion to 90 degrees or greater, control of swelling, inflammation, bleeding

Day 1-2:

- weight-bearing as tolerated with walker
- gait training: safe ambulation and instruct in transfers
- cold therapy – commercial unit used continuously

Exercises:

- Ankle pumps with leg elevation
- Straight leg raises
- Quad sets
- Knee extension 90-30 degrees
- Knee flexion (gentle)
- Passive knee extension exercise

Day 3-14

- weight bearing as tolerated
- gait training: safe ambulation and instruct in transfers
- cold therapy – continue PRN for pain Exercises:
- Ankle pumps with leg elevation • Passive knee extension stretch
- Active assistive ROM knee flexion
- Quad sets
- Straight leg raises
- Hip abduction / adduction
- Knee extension exercise 90-0

PHASE 2 – 2-6 WEEKS POST SURGERY

Goals: Improve range of motion, enhance muscular strength and endurance, dynamic joint stability, diminish swelling/ inflammation, return to functional activities, improve general health.

Criteria to begin Phase 2:

- Controlled straight leg raises.

- Active ROM 0-90 degrees.
- Minimal pain and swelling.
- Independent ambulation and transfers.

2-4 WEEKS

• Weight bearing as tolerated with assistive device

Exercises:

- Quad sets • Knee extension exercise 90-0 degrees
- Terminal knee extension 45-0 degrees
- Straight leg raises (flexion / extension)
- Hip abduction / adduction
- Hamstring curls
- ¼ Squats
- Stretching hamstring, gastrocnemius, soleus, quads
- Bicycle ROM stimulus • Continue passive knee extension stretch

4-6 WEEKS

- Continue compression, ice, and elevation for swelling

Exercises:

- Continue all exercises as previously listed
- Initiate:
  - Front and lateral step-ups at a minimal height
  - ¼ front lunge
  - Pool program

PHASE 3 – 7-12 WEEKS POST SURGERY

Goals: Progression of ROM (0 to 115 degrees and greater), enhancement of strength and endurance, eccentric and concentric control of the limb, cardiovascular fitness, functional activity performance.

Criteria to enter Phase 3:

- Range of motion 0-110 degrees, voluntary quadriceps muscle control, independent ambulation, minimal pain/ inflammation

Exercises:

- Continue all exercises as previously listed
- Initiate:
  - Progressive walking program
  - Endurance pool program
  - Lunges
  - ½ Squats
  - Step ups starting at 2 inches

PHASE 4 – 14-26 WEEKS POST SURGERY

Goals: Allow selected patients to return to advanced level of function (recreational sports), maintain and improve strength and endurance of lower extremity, return to normal lifestyle

Criteria to begin Phase 4:

- Full non-painful ROM 0-115 degrees, strength of 4+ / 5 or 85% of contralateral limb, minimal to no pain and swelling, satisfactory clinical examination

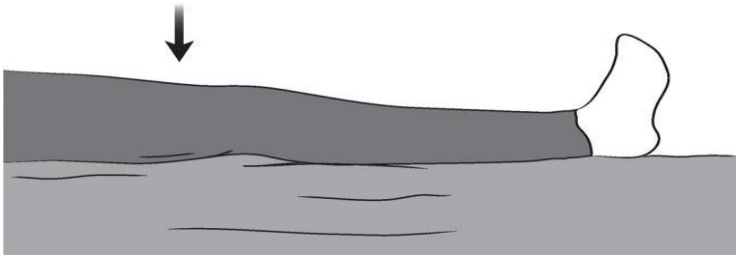
Exercises:

- Quad sets
- Straight leg raises
- Hip abduction / adduction
- ½ Squats
- Lateral step ups
- Knee extension 90-0 degrees
- Bicycle for ROM stimulus and endurance
- Stretching – extension to 0, flexion to 105
- Initiate gradual golf, tennis, swimming, bicycle, walking program

Early Post-operative Exercises

1. Quadriceps Sets

- Tighten your thigh muscle.
- Try to straighten your knee. Hold for 5 to 10 seconds.
- Repeat this exercise approximately 10 times during a 2-minute period, rest one minute, and then repeat.
- Continue until your thigh feels fatigued.

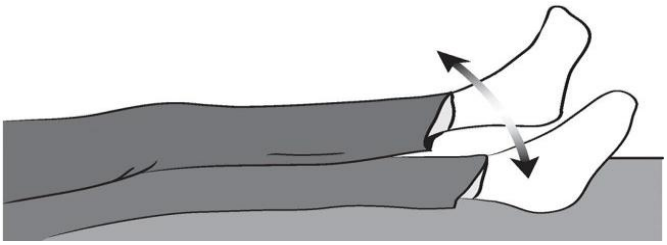


2. Straight Leg Raises

- Tighten your thigh muscle with your knee fully straightened on the bed, as with the quadriceps set above.
- Lift your leg several inches. Hold for 5 to 10 seconds.
- Slowly lower.
- Repeat until your thigh feels fatigued.
- This exercise should take 3 minutes.

You also can do leg raises while sitting.

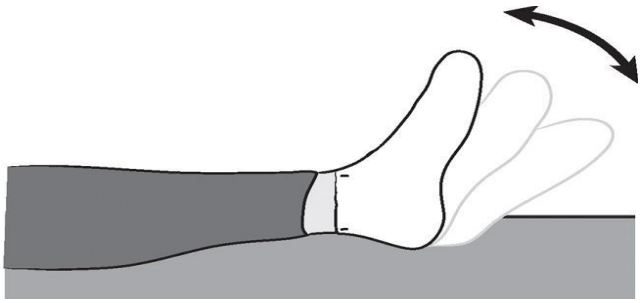
- Tighten your thigh muscle and hold your knee fully straightened with your leg unsupported.
- Repeat as above.



3. Ankle Pumps

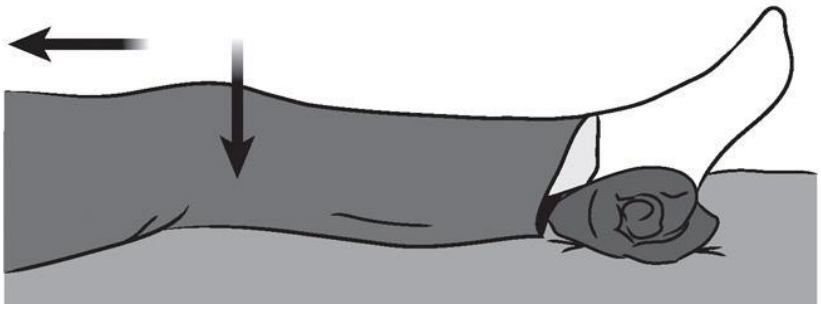
- Move your foot up and down rhythmically by contracting your calf and shin muscles.
- Perform this exercise for 2 to 3 minutes, 2 to 3 times an hour in the recovery room.
- If you are watching TV, do this exercise during every commercial break.

Continue this exercise until you are fully recovered and all ankle and lower-leg swelling has subsided.



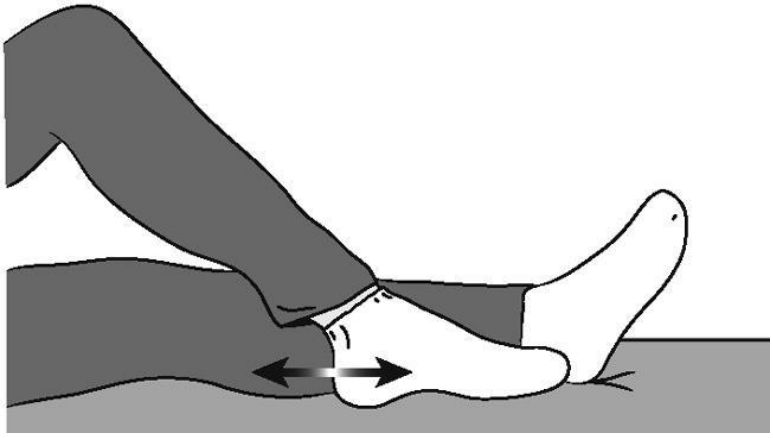
4. Knee Straightening Exercises

- Place a small rolled towel just above your heel so that your heel is not touching the bed.
- Tighten your thigh.
- Try to fully straighten your knee and to touch the back of your knee to the bed. Hold fully straightened for 5 to 10 seconds.
- Repeat until your thigh feels fatigued.
- This exercise should take 3 minutes.



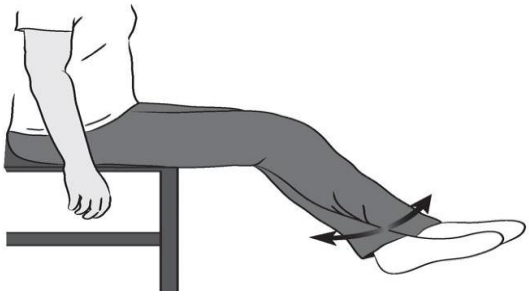
5. Bed-Supported Knee Bends

- Slide your foot toward your buttocks, bending your knee and keeping your heel on the bed. Hold your knee in a maximally bent position for 5 to 10 seconds.
- Straighten your leg.
- Repeat several times until your leg feels fatigued or until you can completely bend your knee.
- This exercise should take 2 minutes.



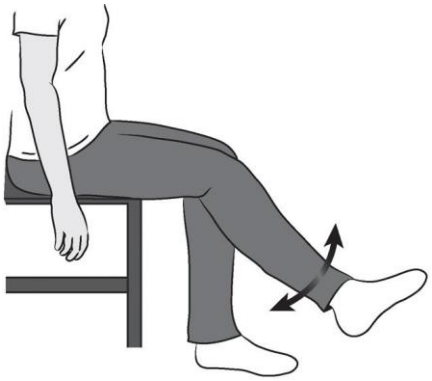
6. Sitting Supported Knee Bends

- While sitting at your bedside or in a chair with your thigh supported, place your foot behind the heel of your operated knee for support.
- Slowly bend your knee as far as you can. Hold your knee in this position for 5 to 10 seconds.
- Repeat several times until your leg feels fatigued or until you can completely bend your knee.
- This exercise should take 2 minutes.



7. Sitting Unsupported Knee Bends

- While sitting at bedside or in a chair with your thigh supported, bend your knee as far as you can until your foot rests on the floor.
- With your foot lightly resting on the floor, slide your upper body forward in the chair to increase your knee bend. Hold for 5 to 10 seconds.
- Straighten your knee fully.
- Repeat several times until your leg feels fatigued or until you can completely bend your knee.
- This exercise should take 3 minutes.



8. *Walking*

Proper walking is the best way to help your knee recover. At first, you will walk with a walker or crutches. Your surgeon or therapist will tell you how much weight to put on your leg.

- Stand comfortably and erect with your weight evenly balanced on your walker or crutches.
- Advance your walker or crutches a short distance; then reach forward with your operated leg with your knee straightened so the heel of your foot touches the floor first.
- As you move forward, your knee and ankle will bend and your entire foot will rest evenly on the floor.
- As you complete the step, your toe will lift off the floor and your knee and hip will bend so that you can reach forward for your next step. Remember, touch your heel first, then flatten your foot, then lift your toes off the floor.

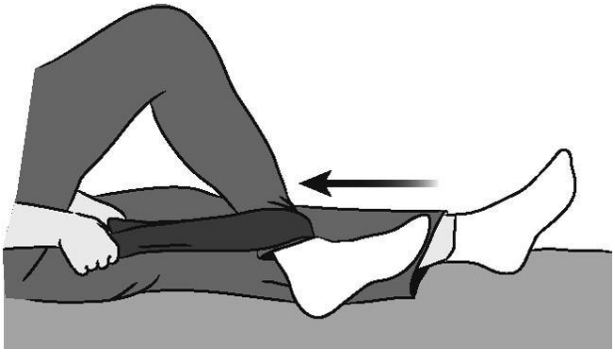
9. *Stair Climbing and Descending*

Stair climbing is an excellent strengthening and endurance activity that also requires flexibility.

- At first, you will need a handrail for support and will be able to go only one step at a time.
- Always lead up the stairs with your good knee and down the stairs with your operated knee. Remember, "up with the good" and "down with the bad."
- You may want to have someone help you negotiate stairs until you have regained most of your strength and mobility.
- Do not try to climb steps higher than the standard height (7 inches) and always use a handrail for balance.
- As you become stronger and more mobile, you can begin to climb stairs foot over foot.

11. *Assisted Knee Bends*

- Lying on your back, place a folded towel over your operated knee and drop the towel to your foot.
- Bend your knee and apply gentle pressure through the towel to increase the bend. Hold for 5 to 10 seconds.
- Repeat several times until fatigued.
- This exercise should take 2 minutes.



12. *Exercycling*

Riding an exercise bike is an excellent activity to help you regain muscle strength and knee mobility.

- At first, adjust the seat height so that the bottom of your foot just touches the pedal with your knee almost straight.
- Peddle backwards at first.
- Ride forward only after a comfortable cycling motion is possible backwards.
- As you become stronger (at about 4 to 6 weeks) slowly increase the tension on the exercycle. Exercycle for 10 to 15 minutes, 2 times a day, and gradually build up to 20 to 30 minutes, 3 to 4 times a week.

Pain or Swelling after Exercise
You may experience knee pain or swelling after exercise or activity. You can relieve this by elevating your leg and applying ice wrapped in a towel. If you use ice, it should be placed on the knee for 20 minutes and then removed for 20 minutes; this sequence should be repeated for about 2 hours.

Exercise and activity should consistently improve your strength and mobility. If you have any questions or problems, contact your orthopaedic surgeon or physical therapist.