



Total Knee Arthroplasty

Discharge Instructions

Comfort

- Discomfort increases 2-3 after surgery due to the injected medication wearing off. 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 three days.
 - You may use it 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.
- **Medication**
 - For **anticoagulation** – you **MUST** take one 81mg aspirin daily for the first month to help prevent blood clots. This is the only mandatory medication.
 - For **nausea** – Zofran (ondansetron) as needed.
 - For **constipation** – over the counter remedies such as Colace or Miralax as needed. Both the anesthesia and the pain medication can cause constipation.
 - For **pain**
 - Celebrex (celecoxib) – 200mg once daily is recommended
 - A narcotic pain medication will be prescribed for you if it is deemed safe with your history and allergies. Try to manage your pain with ice and Tylenol and use the narcotic sparingly. Some patients find they do not need the narcotic at all. Common side effects such as constipation, nausea and cognitive impairment may occur. Tylenol can be used as a step-down medication and is recommended as soon as possible. It is very common however, to use the pain medication at night to help sleep better or around the time of therapy so you can participate more comfortably.

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/lying 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

- 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.

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. Some people experience nausea as a temporary reaction to anesthesia.

Call your physician if:

- You notice more than 25% of the bandage has become saturated with drainage.
- You develop a temperature over 100.3 degrees.
- You have persistent pain and / or swelling in your calf.
- The knee becomes hot to the touch, red, intolerably painful, or swells suddenly. (Note some warmth, pain, and swelling are normal.)
- You have any questions or concerns. We are happy to talk to you at any time! If it is after hours, our answering service will page the PA on call and he or she will get in touch with you.

Recovery milestones:

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

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. $\frac{1}{4}$ front lunges
- Week 8 – Rebuild strength. Full front lunges. $\frac{1}{2}$ 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

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