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TOTAL KNEE ARTHROPLASTY (TKA) PROTOCOL

The following protocol should be used as a guideline for rehabilitation progression, but may need to be altered pending the nature and extent of the surgical procedure, healing restraints or patient tolerance.

- Patients will be weight bearing as tolerated with a rolling walker or other piece of medical equipment as seen fit by the surgeon. Patients may progress from a walker to a straight cane when they can demonstrate equal weight distribution, adequate balance, and limited limp.
- Knee immobilizer: can be worn the day of surgery until you get home. When the nerve block has worn off, discontinue use of the immobilizer to ensure you are bending the knee.
- **Wound care:** Patients will have staples, surgical glue or steri-strips over the incision.
 - **Drs Price, Popham, Griffin Sinicrope, and Salamon** - If being sent home the same day as surgery, remove the post-surgical dressings 48 hours after surgery.
 - **Drs Nawab, Rueff, Smith, Rhea, and Ellis** - If being sent home the same day as surgery, remove the post-surgical dressings 5 days after your surgery.
 - **If staying overnight in the hospital** – post-surgical dressings will be taken care of by the nursing staff in the hospital and wound care instructions will be given upon discharge.
 - Staples will be removed 10-14 days after surgery. The Surgical Glue and Steri-strips will fall off over time. Patients may shower after 72 hours with the waterproof dressings, but will need to cover the dressings that are not waterproof. Once the dressings are removed, do not submerge the incision under the water until it has healed at approximately 4 weeks post-op.
***Please call the office if any new redness or drainage appears around the incision.
- TED hose/Compression garments should be worn during waking hours and removed at night time. They can be worn for up to 6 weeks post operatively.
- Patients should ice 20-30 minutes every 1-2 hours you are awake during the day. Elevate your leg above your heart while icing to help decrease edema. This can be done by placing pillows under the ankle.
- Do not put pillows under the knee. Put the pillow or towel roll under the calf/heel to help regain extension.
- No driving for 6 weeks after right knee surgery; left knee surgery may drive sooner if not taking narcotic pain medications. Discuss with your surgeon or therapist.

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- Step Count – to avoid doing too much activity and causing increased inflammation, we recommend the following daily step count
 - Week 1 post op: 750 steps per day
 - Week 2 post op: 1200 steps per day
 - Week 3 post op: 2000 steps per day
 - Week 4 post op: 2750 steps per day

PHASE 1: INITIAL PHASE

Post-Op Day 2 – 10 (Home Health PT- **Focus on early ROM, swelling reduction and pain control**)

- **Edema reduction:**
 - **Soft tissue mobilization to promote edema reduction**
 - **Hivamat**
 - **Normatec vasocompression– no higher than level 3 or 4 until the incision is completely closed.**
- Knee flexion exercises: heel slides, seated knee flexion stretches
- Knee extension exercises:
 - Supine knee extension stretch
 - Calf stretch
 - Hamstring stretch
- Strength exercises:
 - Ankle Pumps
 - Quad Sets – may be done with NMES for VMO activation
 - Gluteal sets
 - Short arc quads (SAQ's) on towel roll
 - Supine SLR's (focus on independent leg raise first and then eliminating extension lag)
 - Side lying hip ABD
 - Standing heel raises
 - Standing toe raises
- Work on proper gait mechanics
- ****Range of motion should be approximately 5° - 100° by the end of this phase**
- Manual therapy for edema reduction and soft tissue mobilization to promote ROM

Weeks 2-4

- Edema reduction as needed:
 - Soft tissue mobilization to promote edema reduction
 - Hivamat

- Normatec vasocompression– no higher than level 3 or 4 until the incision is completely closed.
- **Focus should be regaining ROM, reducing swelling/inflammation, and eliminating extension lag with gait and SLR's**
- Manual therapy – patella mobilization, PA/AP tibial mobilizations (grade I/II), Manual therapy for edema reduction and soft tissue mobilization to promote ROM
- Knee flexion exercises: heel slides, wall slides, cycle for ROM only
- Knee extension exercises: Knee extension stretches > supine heel props > prone leg hangs
- Strengthening exercises:
 - Continue with early Phase 1 exercises
 - 4 – way SLR's
 - Standing knee flexion/Hamstring curls
 - Hip ER/Clamshells
 - Hamstring Isometrics on ball > Bridges on ball
- Modalities PRN – NMES, IFC E-stim, Vasocompression, Cryotherapy

PHASE 2: INTERMEDIATE PHASE

Weeks 4-6

Continue with previous or modified versions of previous exercises, but may add:

- **Expectations of AROM 0°-120°+**
- Standing TKE's with theraband
- Mini squats – only added if patient can perform without increased pain or edema
- Standing Marches
- Core strengthening as tolerated
- Step Ups - only added if patient can perform without increased pain or edema
- Step Downs - only added if patient can perform without increased pain or edema
- Single leg stance/balance retraining
- Manual Therapy – patella mobilization, PA/AP tibial mobilizations (grade I/II), Manual therapy for edema reduction and soft tissue mobilization to promote ROM
- Modalities PRN

PHASE 3: ADVANCED PHASE

Week 7 – 3 months

Continue with previous or modified versions of previous exercises, but may add:

- Increase resistance with hip exercises
- Walking program – begin at ¼ mile and gradually increase
- Upper body machines
- For cardiovascular fitness – elliptical, walking outside or on a track, aquatic exercise, cycle.
- Golf – may begin chipping or putting at 6 weeks, driving at 3 months, and then slowly progress into a full game

PHASE 4: FINAL PHASE

3 months +

Continue with previous or modified versions of previous exercises, but may add:

- Begin using leg weight machines
- Recommended activities – elliptical, cycle, walking, aquatic exercise, low impact aerobics, yoga, tai chi, exercise ball exercises
- As Surgeon allows at a later date – running/jogging, high impact aerobics, jumping rope or plyometrics