United Therapy Services

Home Health Physical Therapy Protocol - Total Knee Arthroplasty (TKA)

Purpose: The purpose of this protocol is to provide the Home Health Physical Therapist and Physical Therapist Assistant guidance in advancing a patient through the second and third phases of therapy for patients who have undergone a primary Total Knee Arthroplasty. This is in no way a substitute for clinical decisions made by the PT/PTA based on physical exams and clinical findings. In the event that a therapist requires assistance in the progression of a post-surgical TKA patient, he or she should contact the referring surgeon.

Pain Management: Proper pain management in the second and third phase of healing post TKA is critical in achieving full range of motion (ROM), proper functional strength and the transference of these improvements into safe and functional independence with ambulation, transfers and a return to community-based activities.

Pain management strategies may include:

- Taking pain medication as prescribed
- Scheduling the intake of pain medication approximately ½ hour prior to the scheduled treatment
- Performing self-directed ROM exercises before and after treatment
- Applying cold packs or other cryotherapy modalities after treatment

Phase 1: This phase is generally encountered in the hospital as it includes days 0-3. The goals for this phase is to decrease swelling, increase ROM, promote muscle control so that the patient can achieve an increased level of safety and independence with bed mobility, transfers and ambulation. The patient is also educated as to the precautions and considerations needed to promote safety and healing as they begin to recover.

Phase 2: (Day 3 to week 6)

Goals:

- Improve active range of motion (AROM) of the knee to 0-110°
- Muscle strengthening of the surgical limb, emphasis on knee extensors and flexors
- Muscle strengthening in other areas identified as being weak such as upper extremities, trunk or in the non-surgical lower extremity.
- Proprioceptive training to improve body and special awareness of the surgical limb during functional activities
- Endurance training to increase tolerance to activities
- Transfer training to focus on the actual surfaces the patient transfer to and from in his or her living environment, this includes vehicle transfers.

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- Gait training should be performed in the patient's living environment and should include specific training to and from functional areas such as, bathrooms, kitchen, living room and bedrooms. Assistive devices maybe discontinued once the patient demonstrates adequate strength in the surgical limb and balance during functional activities.
- Decrease inflammation and swelling
- Return to functional activities
- Become independent with the home exercise program

Therapeutic Exercises:
Weeks 1-4:
- AA/A/PROM, stretching for flexion greater than 90° and extension to 0°.
- Lower Extremity cycle for ROM, begin with partial revolutions then progress as tolerated to full revolutions without assistance.
- Patella-Femoral and Tibial-Femoral joint mobilizations as indicated
- Isometric exercises for quadriceps, hamstrings and gluteal muscles
- Supine heel slides and seated Long Arc Quad (LAQ)
- Straight Leg Raise (SLR) in 4 planes – Flexion, Abduction, Adduction and Extension
- Gait training to improve the overall control and quality of the surgical limb during swing phase (reach terminal knee extension, prepare for initial contact with heel strike) and single leg stance phase (increase time, quad control and promote equal step length on the non-surgical limb). Therapist should encourage the patient to wean off of using their assistive device when the patient demonstrates safety.
- Posture training should be performed with all activities.

Weeks 4-6:
- Continue above exercises and mobilizations
- Front and lateral step-up and step-down
- ¼ front lunge
- Use sit to/from stand exercises to increase knee ROM into flexion

Please Note: Patient may progress to resistive exercises as tolerated in this phase.

Modalities: The use of Cryotherapy (ice packs and cold packs) may be used throughout the day, 1-3x per day if the patient does not have an open incision and does not have any sensory deficits over the surgical site.

Precautions:
- WBAT with the use of an assistive device to minimize the utilization of a compensatory gait pattern.

- Monitor wound healing and edema

Criteria for progression into the third phase:
- AROM of postoperative knee is 0-110°
- Appropriate voluntary control of the quadriceps muscle

Phase 3: (7-12 weeks)

*Please Note: It is not uncommon for a patient in this phase to be treated at an outpatient physical therapy clinic.

Goals:
- Achieve maximum ROM of the postoperative knee (0-115°)
- Achieve good patella-femoral mobility
- Achieve good strength (4+/5 or greater) of both lower extremities
- Return to being functionally independent with all activities in the home and demonstrate good safety with all functional tasks
- Achieve pain-free AROM from 0-115°
- Discharge to self-care or to an outpatient clinic

Therapeutic Exercises:
- Continue with exercises listed in phase 2 with progression in both resistance and repetition.
- Initiate and progress age-appropriate balance and proprioceptive exercises.
- Initiate endurance program to improve standing time and promote ambulation in the community.

Example of written goals:
- STG: The patient will demonstrate sit to/from stand transfers from his primary household seat with modified independence 5/5 times without verbal or physical cues for safety while using proper body mechanics.
- LTG: The patient will ambulate on even and uneven surfaces without the use of an assistive devices, with equal step length and SLS time bilaterally independently x350 feet so that he can safely and independently access all functional areas in his home environment.

This physical therapy protocol only applies to a primary Total Knee Arthroplasty. A revision of a total knee arthroplasty or after a manipulation will require greater time in each phase. In the event that a surgeon has his or her own protocol it will supersede this protocol so long as it meets the physical therapy standards of care.