This rehabilitation program is designed to return the individual to their full activities as quickly and safely as possible, following a total knee replacement. Modifications to this guideline may be necessary dependent on physician specific instruction or other procedures performed. This evidence-based total knee replacement guideline is criterion-based; time frames and visits in each phase will vary depending on many factors. The therapist may modify the program appropriately depending on the individual’s goals for activity following a total knee replacement.

This guideline is intended to provide the treating clinician a frame of reference for rehabilitation. It is not intended to substitute clinical judgment regarding the patient’s post-operative care based on exam/treatment findings, individual progress, and/or the presence of concomitant procedures or post-operative complications. If the clinician should have questions regarding post-operative progression, they should contact the referring physician.

**Precautions:**

* WBAT
* If patient has a concomitant injury/repair, weight bearing or treatment may vary-consult with physician.

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| **Phase** | **Suggested Interventions** | **Goals/Milestones for Progression** |
| Preoperative: | PT for manual therapy to improve ROM, therapeutic exercises to improve functional strength, modalities to control pain and inflammation, educate patient on upcoming surgery and beginning post-op exercises. | Instruct items as needed to address current deficit. |
| **Phase I** *Date of Surgery –**2 – 3 Weeks* | *Therapy:**In Hospital:** Begin bed mobility, transfers, sitting EOB, standing EOB with FWW, and ambulation day of surgery.
* Continue AAROM and AROM exercises including:
* Ankle pumps, quad sets, ham sets, SAQ, SLR
* Continue bed mobility and transfers/gait with FWW.
* Begin ADL training including:
	+ Reacher, sock aide, etc.
* Progress mobility with FWW.
* Progress to independent exercises including:
* LAQ, hamstring curls, polish the floor, bend on ball, as appropriate
* Instruct in HEP
* Address stair/curb training as needed
* Assist pt in acquiring equipment including: Bath chair, reacher, sock aide, toilet raiser, etc.
* Safe functionally within the home

Outpatient:* Control pain and inflammation, modalities PRN
* Progress strengthening, muscle re-education, ROM, HEP, and independent mobility
* ROM goal of (0-100) degrees
* Soft tissue mobilization for scar management.
* PROM/assisted stretch/grade 1-2 joint mobilization.
* Stationary bike on low resistance, “rocking” if unable to perform revolutions.
* Gait training to increase weight bearing tolerance, decrease need for AD and progress to cane or no AD
* Stair training using reciprocal pattern
 | *Goals of Phase:*1. Skin healing
2. Protection of joint replacement
3. Return to least restrictive environment for continued care

*Criteria to Advance to Next Phase:*1. Sutures are removed
 |
| **Phase II***Weeks 3 – 6* | *Therapy:** Regain endurance
* Increase coordination and proprioception
* Improve strength
* ROM 0-110
* Restore normal gait, wean off assistive devices at 4 weeks.
* Control pain and inflammation with modalities PRN
* Progress HEP
* Strengthening in open and closed chain
* Joint mobilization and assisted ROM
* Proprioceptive exercises
 | *Goals of Phase:*1. Healing
2. Swelling reduction
3. Increase in ROM
4. Improved strength
5. Neuromuscular re-education

*Criteria to Advance to Next Phase:* 1. Healing as expected.
 |
| **Phase III***Weeks 7 – 12* | *Therapy:** Return to prior activity
* Improve flexion ROM past 110 degrees
* Gain eccentric-concentric control of limb
* Independent ambulation
* Progress to more independent HEP.
* Direct treatment to residual restrictions in ROM, strength, or function.
 | *Goals of Phase:* 1. Swelling reduction
2. Increase in ROM
3. Neuromuscular re-education
4. Develop baseline of lower extremity control and strength

*Criteria to Advance to Next Phase:* 1. Normal Gait pattern
2. Pain control
3. Edema managed
4. Goals achieved for ROM
5. Independent HEP.
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