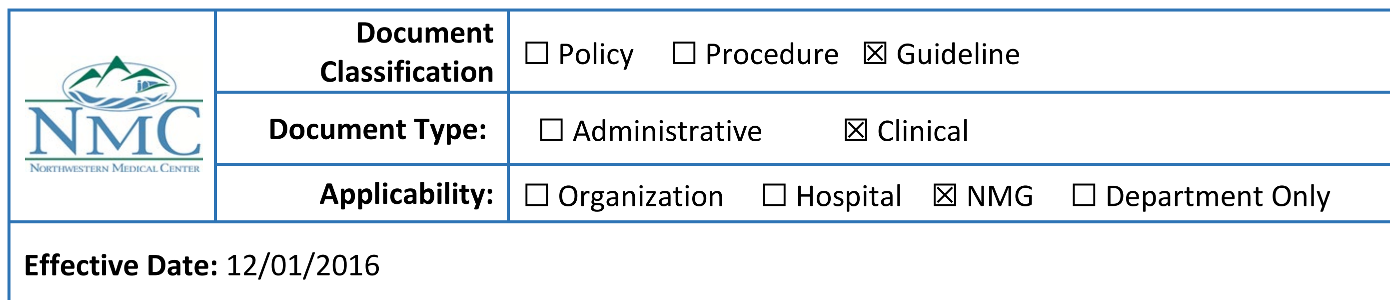
Total Knee Replacement Guideline



NMC Northwestern Medical Center	Document Classification	☐ Policy ☐ Procedure ☒ Guideline
	Document Type:	☐ Administrative ☒ Clinical
	Applicability:	☐ Organization ☐ Hospital ☒ NMG ☐ Department Only
Effective Date: 12/01/2016		

Purpose: Define the process to be followed for all patients referred from Northwestern Orthopedics after the above procedure has been performed.

Target Users: Treatment will follow the defined guidelines below and be carried out by Physical Therapist, Occupational Therapist, Athletic Trainer and/or Physical Therapy Assistants.

- **Definitions:** AROM=Active Range of Motion
- AAROM= Active Assisted Range of Motion
- PROM= Passive Range of Motion
- ER= External Rotation
- IR= Internal Rotation
- PT= Physical Therapist

Guidelines:

- **All patients attend at least one PT/OT visit for pre-op education at Northwestern Medical Center-Reference Pre-Op Total Joint Replacement Outline.**

<u>Home day of surgery</u>

Not seen by physical therapist unless ordered by provider, will be seen by nursing staff

Goals: Edema and pain control education
Safe bed mobility, transfers & ambulation for discharge

<u>Acute Care POD 0 – 3</u>

Acute Care Physical Therapy begins on the day of surgery or Post op day #1 (dependent on anesthesia and patients motor control). Frequency 2x/day

Goals: Knee ROM 0-90
Edema education
Safe bed mobility, transfers & ambulation for discharge
Patient education- Cryocuff, HEP, quadriceps contraction, frequent walking, prevent blood clots, use of sequential compression devices (whenever not up ambulating).

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Edema Control:

Ice/Cryocuff/Elevation

Physical Therapist will provide patient with elasticized tubular bandage (such as tensogrip). One section applied to the base of the toes to the mid-calf and a second from the mid-calf to above the knee. Therapist will size appropriate to the patient and educate in use.

Gait:

Expectation that patients are in a chair for breakfast and lunch.

Ambulation with walker, cane, or appropriate assistive device

Stair training performed on POD#1 or POD#2

Exercises:

(see attached copy at end of document)

Education:

Cryocuff, Home Exercise Program, Frequent Walking

Phase One (Post Op Day 4 to Post Op Week 4)

Outpatient physical therapy will begin on land and/or in the aquatic environment depending on physician direction and/or patient request.

Goals: Control edema - <2cm difference to uninvolved knee

Full knee extension

Gradually increase knee flexion 0-110

Independent quadriceps control evident by strong SLR without lag.

Independent with ADLs individualized to patient.

Edema Control:

Ice/Cryocuff/Elevation

Home SCD's

Tensogrip (compression)/kinesiotape

ESTIM

Aquatic Therapy

Dressing change:

Aquacel AG removed, and the wound is cleansed with chloroprep. Then the dressing is re-applied at post op day 7-10 using good sterile technique with the knee in 30-40 degrees of flexion. Leave the dressing in place an additional 7-10 days and then leave open to air. If the incision is still draining re-apply Aquacel AG until there is no drainage. Patients may shower but cover the dressing with plastic to keep the dressing dry. Patients should not soak in bathtub, hot tub or pool until incision is healed, at least 4 weeks after surgery. If the therapist or patient notes wound problems such as progressive redness, pain, swelling, heat, and in particular drainage or fever, call the orthopedic office at (802) 524-8915.

Gait:

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Independent with ambulation without an antalgic gait with or without assistive device.
Independent negotiating stairs with or without an assistive device
Initial focus on household environment, progressed to community environment.

Exercises:

- Progression of ROM as tolerated.
- Stationary Bicycle/Recumbent Stepper (partial revolutions progressed to full revolutions). Adjusting the seat as tolerated to increase flexion.
- Stationary bicycle for home use if patient has access.
- Patellar Mobilizations
- Progression of acute care home program (available at end of this document).
- Progressive Resisted Exercises, open/closed chain activities when swelling and pain are well controlled.
- Functional strengthening
- Aquatic exercises start at 4 weeks.

<u>Phase Two Weeks 4 +</u>

Frequency 1-2x/week to 1x/every other week with tapered frequency until goals are met or patient plateaus. (Average time 4–12 weeks). Documentation to justify variations pending objectives & functional status. NMC Physical Therapy will recommend that patients utilize our 'open gym' for continuation of non-skilled exercises developed by the therapist. Aquatic PT can be considered at the 4-week timeframe. Average frequency 2x/week variations pending objectives & functional status.

Goals:

AROM > or = 0-120 degrees
MMT > or = 4+/5 LE strength with patient specific functional activities
Good proprioception with patient specific functional activities
Independent gait without an assistive device (if safety allows) on uneven surfaces.
Independent negotiation of stairs, reciprocal gait pattern without rail/cane if safe
Independent driving if applicable

Exercises:

Progressive Resistive Exercises
Functional Strengthening
Proprioceptive Training/Neuromuscular Re-education

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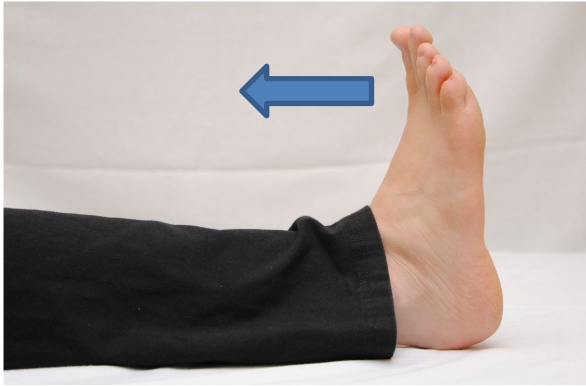
Acute Care Exercise Program that patient is discharged with:

Ankle Pumps

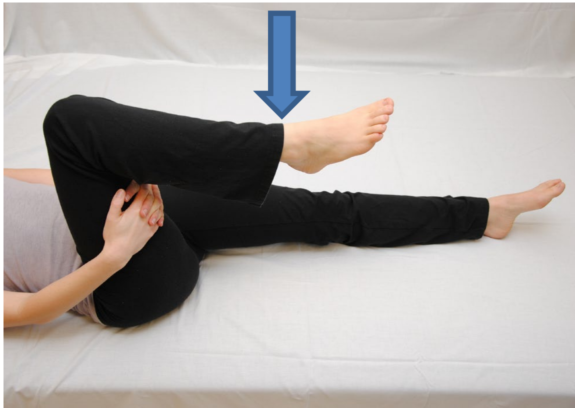


Seated Knee Flexion

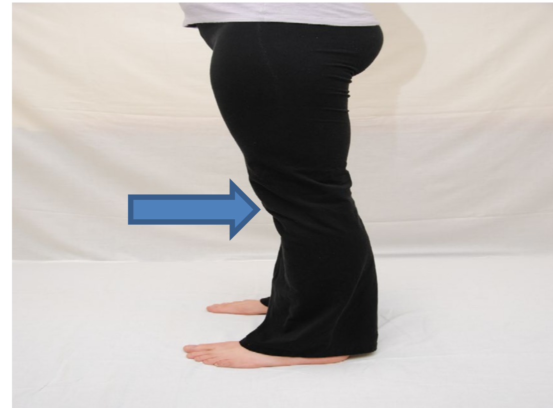
Quadricep Sets

Supine Knee Flexion

Knee Flexion Lying Down



Standing Terminal Knee Extension



Straight Leg Raise

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Responsibilities:
Variances will be communicated by the surgeon directly to the rehabilitation staff.

References:

Clinical Orthopedic Rehabilitation a Team Approach
Fourth Edition Giangarra, Charles, Manske, Robert, Brotzman S. Brent copyright 2018

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