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Total Knee Arthroplasty Physical Therapy Protocol

Phase I

Immediate Postoperative Phase (Day 0 – 10)

Goals:

- Active quad contraction
- Safe independent ambulation with walker or crutches as needed
- Passive knee extension to 0 degrees
- Knee flexion to 90 degrees or greater
- Control of swelling, inflammation, bleeding

Day 0-2:

Weight bearing as tolerated with walker/2 crutches as needed starting on Day 0-1
Cryotherapy immediately and continuously unless ambulating
ROM of knee to begin immediately post op

Exercises

- Ankle pumps
- Passive knee extension to 0 degrees
- SLR
- Quad sets
- Knee flexion to at least 90 degrees
- Knee extension to 0 degrees
- Instruct in gait training - safe transfers

Day 3-10:

Weight bearing as tolerated with walker/2 crutches as needed

Cryotherapy

Exercises

- Ankle pumps
- Passive knee extension to 0 degrees

SLR
Quad sets
AAROM - Knee flexion to at least 90 degrees
Hip adduction/abduction
Instruct in gait training – safe transfers
Start stationary bike, low resistance

Phase II: Motion Phase (Week 2-6)

Goals: Improve ROM
Enhance muscular strength, endurance
Dynamic joint stability
Diminish swelling/inflammation
Establish return to functional activities

Criteria to enter Phase II:
Leg control, able to perform SLR
AROM 0-90 degrees
Minimal pain/swelling
Independent ambulation/transfers

Weeks 2 -4:

WBAT with assistive device as needed. Wean from walker to cane or from 2 crutches to 1 by 2 weeks. Wean off all assistive devices by no later than 4 weeks.

Exercises:
Quad sets
SLR
VMO recruitment during quad sets and SLR
Knee extension 90-0 degrees
Terminal knee extension 45-0 degrees
Hip abduction/adduction
Hamstring curls
Knee flexion to at least 115 degrees

Stretching:
Hamstrings
Gastroc/soleus
Quads
Passive knee extension stretch

Continue stationary bike and advance resistance as tolerated
Continue cryotherapy

Patellofemoral mobilization
Incision mobilization
Patients may begin to drive if they are no longer using assistive devices for ambulation (about 2 weeks post op)

Weeks 4-6:

Exercises:

- Continue previous exercises
- Initiate front and lateral step ups
- Advance resistance on stationary bike
- Initiate progressive walking program
- Initiate endurance pool program, swimming with flutter kick
- Return to functional activities

Continue compression, ice, elevation as needed for swelling
Patients should be walking and driving independently at this point

Phase III: Intermediate Phase (Weeks 7-12)

Goals: Progression of ROM to greater than 115 degrees
Enhancement of strength and endurance
Eccentric/concentric control of limb
Cardiovascular fitness
Functional activity performance

Criteria to enter Phase III:

- ROM 0-115 degrees
- Voluntary quad control
- Independent ambulation
- Minimal pain

Weeks 7-12:

Exercises: Continue previous exercises
Continue pool activities
Continue walking
Continue stationary bike
Aggressive AROM 0-115 degrees
Strengthen quad/hamstrings

Phase IV: Advanced Activity Phase (Weeks 12 and beyond)

Goals: Allow patients to return to advanced level of function such as recreational sports
Maintain/improve strength and endurance of lower extremity
Return to normal life and routine

Criteria to enter Phase IV:

Full non painful ROM 0-115
Strength 90% of contralateral limb (if contralateral limb is normal)
Minimal pain and swelling
Satisfactory clinical examination

Exercises:

Quad sets
SLR
Hip abduction/adduction
Step ups
Knee extension
Stationary bike
Swimming
Walking
Stretching 0-115 degrees

Return to pre op activities and develop HEP to maintain function of leg.

NO SQUATS OR LUNGES AT ANY TIME!