



## TOTAL KNEE ARTHROPLASTY PROTOCOL

### PHASE 1: IMMEDIATE POST SURGICAL PHASE ( DAY 0 – 10 )

#### Goals:

- Achieve 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:
  - Inflammation
  - Swelling
  - Bleeding

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#### Day 0 - 2:

- Weight bearing as tolerated (*Unless otherwise Specified by Physician*)
  - Walker
  - 2 crutches (*If Balance is Sufficient*)
- Cryotherapy
  - *Immediately and continuously*
  - unless ambulating
- ROM of knee to begin immediately post operatively
- Exercises:
  - Ankle Pumps
  - Passive knee extension to 0 degrees
  - Straight Leg Raises
  - Quad Sets
  - Knee Flexion to at least 90 degrees
  - Knee Extension to 0 degrees
  - Instruct:
    - Gait Training
    - Safe Transfers

#### Day 3 – 10

- Weight Bearing as tolerated
  - Walker
  - Two crutches
- Cryotherapy
- Exercises

A REGISTERED LIMITED LIABILITY PARTNERSHIP FOR ORTHOPAEDIC SURGERY

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- Ankle Pumps
- Passive Knee extension to 0 degrees
- Straight Leg Raises
- Quad Sets
- AAROM:
  - Knee Flexion to at least 90 degrees
- Hip Abduction / Adduction
- Instruct
  - Gait Training
  - Safe Transfers
- Start Stationary Bike
  - Low Resistance

## PHASE II: MOTION PHASE ( WEEK 2 – 6 )

### Goals

- Improve ROM
- Enhance Muscular Strength and endurance
- Dynamic Joint Stability
- Diminish Swelling / Inflammation
- Establish / Return to functional Activities

### Criteria to enter Phase II

- Leg Control
  - Able to perform Straight Leg Raise
- Active ROM
  - 0 - 90 degrees
- Minimal Pain / Swelling
- Independent
  - Ambulation
  - Transfers

### Weeks 2 – 4

- Weight Bearing with Assistive device as needed
- Wean from a walker to a cane OR from 2 crutches to 1 crutch **by 2 weeks**
- Wean off Assistive Device **Completely by no later than 4 weeks**
- Exercises
  - Quad Sets
    - VMO Recruitment
  - Straight Leg Raises
    - VMO Recruitment
  - Knee Extension 90 – 0 degrees
  - Terminal Knee Extension 45 – 0 degrees
  - Hip Abduction / Adduction
  - Hamstring curls

- Knee Flexion to at least 115 degrees
- Stretches
  - Hamstrings
  - Gastrocnemius
  - Soleus
  - Quads
  - Passive Knee Extension Stretch
- Continue Stationary bike
  - Advance Resistance as tolerated
- Continue with Cryotherapy
- Patellofemoral Mobilization
- Incision Mobilization
- Patients may begin to drive
  - **IF** no longer using assistive devices for ambulation
  - *Approx. 2 weeks post op*

### **Weeks 4 – 6**

- Exercises
  - Continue previous exercises
  - Initiate step ups
    - Front
    - Lateral
  - Advance resistance on stationary bike
  - Initiate progressive walking program
  - Initiate endurance pool programs
    - Swimming with flutter kicks
  - 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 Lower Extremity
- Cardiovascular Fitness
- Functional Activity Performance

### **Criteria To Enter Phase III**

- Range of Motion = 0 – 115 Degrees
- Voluntary Quad Control

- Independent Ambulation
- Minimal Pain

### **Weeks 7 – 12**

- Exercises
  - Continue:
    - Previous Exercises
    - Pool Activities
    - Walking
    - Stationary Bike
  - Aggressive AROM 0 – 115 degrees
  - Strengthen Quadriceps / Hamstrings

## **PHASE IV: ADVANCED ACTIVITY PHASE ( WEEKS 12 & BEYOND )**

### **Goals:**

- Allow patients to return to advanced level of function
  - 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 degrees
- Strength 90% of contralateral lower extremity (if that extremity is normal)
- Minimal Pain and swelling
- Satisfactory clinical Examination

### **Week 12 and Beyond**

- Exercises
  - Quad sets
  - Straight leg raises
  - Step ups
  - Hip abduction / adduction
  - Knee extension
  - Stationary bike
  - Swimming
  - Walking
  - Stretching 0 – 115 degrees

**\*\*\* Return to Pre-operative Activities and Develop HEP to Maintain Leg Function \*\*\***

**\*\*\* NO SQUATS OR LUNGES AT ANY TIME \*\*\***