

# TOTAL KNEE ARTHROPLASTY

## Rehab Protocols

 [www.TheAmericanOrthopedics.com/resources](http://www.TheAmericanOrthopedics.com/resources)



Dr. Drew Ratner

## PHASE I - IMMEDIATE POSTOPERATIVE PHASE (WEEKS 0-2)

### Goals

1. Active quadriceps muscle contraction
2. Safe (isometric control), independent ambulation
3. Passive knee extension to 0 degrees
4. Knee flexion to 90 degrees or greater
5. Control of swelling, inflammation, bleeding

### Days 1 - 2

- **Weight Bearing** – Walker/two crutches WBAT
- **ROM** – 0-70 degrees
- **Cryotherapy** – Ice Machine or Bag of ice 20 mins every hour if possible.
- **Exercises**
  - Ankle Pumps with leg elevation
  - Passive knee extension exercise
  - Electrical stimulation to quads
  - Straight leg raises (SLR)
  - Quad sets
  - Knee extension exercise 90-30 degrees
  - Hamstring stretches (gentle)

### Days 4 - 10

- **Weight Bearing** – Walker/two crutches WBAT; can advance to cane
- **ROM** – 0-90 degrees
- **Cryotherapy** – Ice Machine or Bag of Ice at least 3 times per day
- **Exercises**
  - Ankle Pumps with leg elevation
  - Passive knee extension exercise
  - Electrical stimulation to quads
  - Straight leg raises (SLR)
  - Quad sets
  - Knee extension exercise 90-0 degrees
  - Hip abduction/adduction

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### PHASE II - MOTION PHASE (WKS 2 - 6)

#### Goals

1. Improve range of motion
2. Enhance muscular strength/endurance
3. Dynamic joint stability
4. Diminish swelling/inflammation
5. Establish return to functional activities
6. Improve general health

#### Criteria to Enter Phase 2

- Leg control, able to perform SLR
- Active ROM 0-90 degrees
- Minimal pain/swelling
- Independent ambulation/transfers

#### Weeks 2 - 4

- **Weight Bearing** – WBAT with cane if needed
- **ROM** – 0-110 degrees
- **Exercises**
  - Quad Sets
  - Knee extension exercise 90-0 degrees
  - Terminal knee extension 45-0 degrees
  - Straight leg raises (flexion/extension)
  - Hip abduction/adduction
  - Hamstring curls
  - 1/4 Squats
  - Stretching – Hamstrings, Gastrocnemius, Soleus, Quads
  - Bicycle ROM Stimulus
  - Continue passive knee extension stretch
  - Continue use of cryotherapy

#### Weeks 4 - 6

- **Exercises – continue all exercises listed previously. Initiate:**
  - Front and lateral step-ups (minimal height)
  - ¼ front lunge
  - Pool Program
  - Continue compression, ice, elevation for swelling

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## PHASE III - INTERMEDIATE PHASE (WKS 7-12)

### Goals

1. Progression of ROM (0 to 120 degrees and greater)
2. Enhancement of strength/endurance
3. Eccentric/concentric control of the limb
4. Cardiovascular fitness
5. Functional activity performance

### Criteria to enter Phase III

- Range of motion 0-110 degrees
- Voluntary quadriceps muscle control
- Independent ambulation
- Minimal pain/inflammation

### Weeks 7 – 10

- **Exercises** – continue all exercises listed previously. Initiate:
  - Progressive walking program
  - Endurance Pool Program
  - Return to Functional Activities
  - Lunges,  $\frac{1}{2}$  squats, step ups (2" to start)
  - Emphasize eccentric/concentric knee control

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## PHASE IV – ADVANCED ACTIVITY PHASE (WKS 14-26)

### Goals

1. Allow selected patients to return to advanced level of function (recreational sports)
2. Maintain/improve strength and endurance of lower extremity
3. Return to normal life style

### Criteria to enter Phase IV

- Full non-painful ROM 0-115 degrees
- Strength of 4+/5 or 85% of contralateral limb
- Minimal to no pain and swelling
- Satisfactory clinical examination

### Exercises – continue all exercises listed previously. Initiate:

- Straight Leg Raises (flexion/extension)
- Hip abduction/adduction
- 1/2 squats
- Lateral step ups
- Knee extension exercise 90-0 degrees
- Bicycle for ROM stimulus and endurance
- Stretching
  - Knee extension to 0 degrees
  - Knee flexion to 105 degrees
- Initiate gradual golf, tennis, bicycle, walking program

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