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#### PHASE I: MAXIMUM PROTECTION PHASE (1-6 Weeks)

Goals: Control inflammation/effusion

Allow early healing

Full passive knee extension Gradually increase knee flexion Independent quadriceps control

### Stage 1: Immediate post-surgery days 1 through 10

Ice, compression, elevation

Brace locked at 0 degrees for ambulation and sleeping only

Brace may be unlocked while sitting, etc

ROM (passive 0-90)

Patellar mobilizations

Stretch hamstrings and calf

Strengthening exercises:

- Quad sets
- SLR flexion
- Hip Abd/Adduction
- o Knee extension 60-0 degrees

Weight bearing: toe touch with two crutches

Avoid active knee flexion

### Stage 2: Weeks 2 through 4

Continue use of ice and compression

Brace locked for ambulation and sleeping

#### **ROM** guidelines

- o Gradually increase PROM as tolerated
- O Week 2: 0-100 degrees
- o Week 3: 0-110 degrees
- Week 4: 0-120 degrees

Weight bearing guidelines - Continue to lock brace

Toe touch with two crutches for full 6 weeks unless specified differently by provider
 Continue PROM exercises and stretching



### Strengthening exercise

- o Multi-angle quad isometrics
- SLR (all 4 planes)
- o Knee extension 90-0 degrees
- CKC weight shifts

Avoid twisting, deep squatting, and stooping Avoid hamstring strengthening

### Stage 3: Weeks 5 through 6

Full weight bearing at 6 weeks

Initiate CKC exercises such as:

- ½ squat 0°-45°
- Leg press 0°-60°
- Wall squat 0°-60°

# Initiate proprioception training

- Tilt board squats
- Biodex stability

Continue CKC exercise

Initiate hip ABD/Adduction and hip flexion/extension on multi-hip machine\

# PHASE II: MODERATE PROTECTION PHASE (7-12 Weeks)

Goals: Establish full PROM

Diminish swelling/inflammation Re-establish muscle control Promote proper gait pattern

# Weeks 7 through 10

Continue use of ice and compression as needed

Continue ROM and stretching

o Week 7: PROM 0°-125°/130°

Continue use of brace for 8 weeks

Progress strengthening exercises:

- Leg press 70°-0°
- Knee extension 90°-40°
- Hip ABD/Adduction
- Wall squats 0°-70°
- Vertical squats 0°-60°
- Lateral step-ups



o Front step down

Balance/proprioception training

- Biodex stability
- Squats rocker board
- o Cup walking

Bicycle (if ROM permits)

**Pool Program** 

Avoid twisting, pivoting, running and deep squatting

### Weeks 10 through 12

Continue all exercises listed above Initiate "light" hamstring curls Initiate toe calf raises

### PHASE III: RETURN TO ACTIVITY PHASE (Months 6-8)

Goals: Improve strength and endurance
Prepare for unrestricted activities
Progress to agility and cutting drills

# Criteria to Progress to Phase IV

Full non-painful ROM No pain or tenderness Satisfactory clinical exam Satisfactory isokinetic test

### Exercises

Continue and progress all strengthening exercises and stretching drills

- o Progress isotonic program
- Wall squats
- Leg press
- Lateral step-ups
- o Knee extensions 90°-40°
- Hamstring curls
- Hip AB/Adduction
- o Bicycle, stair stepper, elliptical machine

Deep squatting permitted at 5 % months

Initiate straight line running: 6 months



Initiate pivoting and cutting: 7 months Initiate agility training: 7 months Gradually return to sports: 7-8 months