

Neofitos Stefanides, M.D., P.C.

neostefanidesMD@yahoo.com

44-01 Francis Lewis Blvd L3B
Bayside, NY 11361
Ph: 718.989.8515
Fax: 718.626.0102

1205 Franklin Avenue Suite 150
Garden City, NY 11530
Ph: 718.989.8515
Fax: 718.626.0102

30-74 31st st. 2nd fl.
Astoria, NY 11102
Ph: 718.989.8515
Fax: 718.626.0102

Name: _____ **Date:** _____
Diagnosis: _____ **Date of Surgery:** _____

ACL REHAB PROTOCOL

I. IMMEDIATE POSTO-OPERATIVE PHASE

POD 1

Brace-brace locked at zero degrees extension for ambulation
Weight bearing-weight bearing as tolerated with 2 crutches as tolerated
Range of motion- Full passive extension (0-90 degrees)
Exercises:

- Ankle pumps
- Passive knee extension to zero
- Straight leg raise (flexion)
- Hip abd/adduction
- Knee extension 90-40 (active and AAROM)
- Quad sets
- Hamstring stretch
- Cryocuff- Two hours on and two hours off cycle with knee in extension

POD 2-7

Brace- Brace locked at zero degrees extension for ambulation

Weight bearing-2 crutches as tolerated.

Range of Motion-Patient out of brace 4-5 times daily to perform self ROM 0-90/100 degrees exercises

- Intermittent ROM exercises (0-90 degrees)
- Patellar mobilization
- Ankle pumps
- Straight leg raises (4directions)
- Knee extension 90-40 degrees

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- Continue quad sets

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II. MAXIMUM PROTECTION PHASE (Week 2-8)

Goals: Absolute control of external forces and protect graft

Nourish articular cartilage

Decrease swelling

Prevent quad atrophy

A: Week Two

Brace- Brace locked at zero degrees for ambulation only; Unlocked for self ROM (4-5 times a day)

Weight bearing- As tolerated (goal to discontinue crutches 14 days postop)

Range of motion – Self ROM (4-5 times daily), Emphasis on maintaining zero degrees passive extension

Exercises

- Multi-angle isometrics at 90, 60, 30 degrees
- Leg raises (4 planes)
- Hamstring curls (isometrics)
- Knee extension 90-40 degrees
- Mini squats (0-30) and weight shifts
- Leg press (0-60)
- PROM/AAROM 0-105 degrees
- Patella mobilization
- Hamstring and calf stretching
- Proprioception training
- Well leg exercises

Passive Resistive Exercise Program-start with 1 lb., progress 1 lb per week

Discontinue brace at end of week 2

B: Week Four

Range of motion-Self ROM (4-5 times daily), emphasis on maintaining zero degrees passive extension

Exercises:

- Same as week two
- PROM 0-125
- Bicycle for ROM stimulus and endurance
- Pool walking program, swimming
- Initiate eccentric quads 40-100 (isotonic only)
- Leg press (0-60)

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- Emphasis closed kinetic chain exercises
- Stair master

C: Week Six

Exercises:

- Same as week four
- Hamstring curls (light resistance)
- AROM 0-115 degrees
- PROM 0-125 degrees
- Emphasize closed chain exercises
- Bicycle/ stairmaster etc.
- Continue passive resistive exercise program

III. Moderate protection phase (week 10-16)

*Goals: Maximim strengthening for quads/lower extremity
Protect patellofemoral joint*

Exercises:

- Knee extension (90-40 degrees)
- Leg press (0-60)
- Mini squats (0-45)
- Lateral step ups
- Hamstring curls
- Hip abd/add
- Toe/calf raises
- Bicycle
- Stairmaster
- Wall squats
- Lunges
- Pool Running
- Proprioceptive training
- Continue Passive resistive exercise progression (No weight restriction)

IV. Light Avctivity Phase (Month 4-5)

Criteria to enter phase IV

- AROM 0-125 degrees
- Minimal/no effusion

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- *Satisfactory clinical exam*

Goals: Development of strength, power, endurance. Begin gradual return to functional activities

A: Week 20-21 Exercises

- Emphasize eccentric quad work
- Continue closed chain exercises, step ups, mini-squats, leg press
- Continue knee extension 90-40 degrees
- Hip abduction/adduction
- Initiate plyometric program
- Initiate outdoor running program
- Initiate agility program
- Sport specific training and drills
- Hamstring curls and stretches
- Calf raises
- Bicycle for endurance
- Pool running (forward/backward)
- Walking program
- Stairmaster
- High speed isokinetics

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Criteria for outdoor Running

Isokinetic test- 85%> of opposite leg (quads), 90%> of opposite leg (hamstring)

No pain/swelling

Satisfactory clinical exam

Functional drills

- Straight line running
- Jog to run
- Walk to run

V. Return to Activity Phase (Month 6-7)

Achieve maximal strength and endurance

Return to sport activities

Continue strengthening program for one year after surgery

Quads

Knee extensions

Wall Squats

Leg Press

Step ups

Endurance

Bicycle

Stairmaster

Nordic Trac

Swimming

Strength

Hamstring Curls

Calf raises

Hip Abduction

Hip Adduction

Stability

High speed Hamstrings

High speed Hip flexion/Extension

Balance drills

Backward running