

REHABILITATION FOLLOWING ACL RECONSTRUCTION WITH COMPLEX MENISCAL REPAIR

Non weight bearing with two crutches x 4 weeks, knee brace locked in extension when ambulating for first six weeks, ok to unlock when seated or in bed. Wear 24/7 except in shower, when working with PT, or doing ROM exercises at home.

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

Precautions:

- No squatting past 70 degrees for 8 weeks
- No ACTIVE resisted hamstrings for 8 weeks
- No ACTIVE knee flexion beyond 90 degrees for 8 weeks
- No twisting motions for 4 months

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 (set at 0-90) while sitting, etc.
- ROM (passive 0-90)
- Patellar mobilizations
- Stretch hamstrings and calf
- Ankle pumps
- Strengthening exercises:
 - Quad sets, add stim if desired
 - SLR flexion
 - Hip Abd/Adduction
 - Knee extension 60-0 degrees
- Avoid active knee flexion

Stage 2: Weeks 2 through 4

- Continue use of ice and compression
- Brace locked straight for ambulation and sleeping
- ROM guidelines
 - Gradually increase PROM as tolerated
 - Week 3: 0-100 degrees
 - Week 4: 0-120 degrees
- Weight bearing: non weight bearing with two crutches
- Continue PROM exercises and stretching

- Strengthening exercises
 - Multi-angle quad isometrics
 - Stim to quads during quad exercises
 - SLR (all 4 planes)
 - Knee extension 90-30 degrees
 - CKC weight shifts
 - Well leg exercises

*Avoid twisting, deep squatting, and stooping

*Avoid hamstring strengthening

Stage 3: Weeks 5-6

- Initiate CKC exercise such as:
 - ½ squat 0-45 degrees
 - Leg press 0-60 degrees
 - Wall squat 0-60 degrees
- Initiate proprioception training
 - Tilt board squats
 - Biodex stability
- Continue CKC exercise
- Weight bearing guidelines: Continue to lock brace
 - Week 5: 25% WB
 - Week 6: 50% WB
- Initiate hip Abd/Adduction and hip flexion/extension on multi-hip machine

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

Goals: Establish full PROM
Diminish swelling/inflammation
Re-establish muscle control
Promote proper gait pattern

Weeks 7-10

- Weight bearing as tolerated with brace unlocked 0-90
- Continue use of ice and compression as needed
- Continue ROM and stretching
 - Week 7: PROM 0-125/130 degrees
- Continue use of brace for 8 weeks total
- Progress strengthening exercises
 - Leg press 70-0 degrees
 - Knee extension 90-40 degrees
 - Hip Abd/Adduction
 - Wall squats 0-70 degrees
 - Vertical squats 0-60 degrees
 - Lateral step-ups
 - Front step downs
- Balance/proprioception training

- Biodex stability
- Squats rocker board
- Cup walking
- Bicycle
- Pool program

*Avoid twisting, pivoting, running and deep squatting

Weeks 10-12

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

PHASE III: CONTROLLED ACTIVITY PHASE (Weeks 13-18)

Goals: Improve strength and endurance
Maintain full ROM
Gradually increase applied stress

Week 13

- Continue all strengthening exercises listed above
- Initiate stair stepper
- Tilt board/perturbation training
- Sports RAC repositioning on tilt board
- Lateral step ups/lunges/step overs
- Toe calf raises
- Progress balance training
- Progress to isotonic strengthening program
- Initiate front lunges
- Initiate pool running (forward and backward)
- Initiate walking program

Week 16

- Continue strengthening and stretching program
- Progress walking program
- Initiate running and cutting in pool

PHASE IV: RETURN TO ACTIVITY PHASE (Months 5-6)

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
 - Progress isotonic program
 - Wall squats
 - Leg press
 - Lateral step-ups
 - Knee extensions 90-40 degrees
 - Hamstring curls
 - Hip abduction/adduction
 - Bicycle, stair stepper, elliptical machine
- Deep squatting permitted at 5 months
- Initiate straight line running: 4 months
- Initiate pivoting and cutting: 5 months
- Initiate agility training: 6 months