

**MENISCUS REPAIR (COMPLEX TEARS)
REHABILITATION PROTOCOL**
Chase D. Smith, MD

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
 - 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
 - Gradually increase PROM as tolerated
 - Week 2: 0-100 degrees
 - Week 3: 0-110 degrees
 - Week 4: 0-120 degrees
- Weight bearing guidelines → Continue to lock brace
 - Week 2: 25-50% WB
 - Week 3: 50-75% WB
 - Week 4: FWB as toleration
- Continue PROM exercises and stretching
- Strengthening exercises
 - Multi-angle quad isometrics
 - SLR (all 4 planes)
 - Knee extension 90-0 degrees
 - CKC weight shifts

*Avoid twisting, deep squatting, and stooping

*Avoid hamstring strengthening

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Stage 3: Weeks 5-6

- Weight bearing: as tolerated
- 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
- 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

- 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
- 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 (if ROM permits)
- Pool program

*Avoid twisting, pivoting, running and deep squatting

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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
- 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 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
 - Progress isotonic program
 - Wall squats

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- 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 ½ 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