

## Meniscal Repair Rehab Protocol

### Phase 1: 0-2 Weeks Post-Op

#### *Goals:*

- Control inflammation/effusion
- Allow early healing
- Full passive knee extension
- Gradually increase knee flexion
- Independent quadriceps control

#### *Protocol:*

- Apply ice to knee as tolerated, elevate knee at all times possible
- Use crutches at all times for non-weight bearing
- If given a brace, may remove Immobilizer for shower, exercises, and relaxing but should be worn all other times
- May remove brace and move knee passively 0-45 deg first week and 0-60 deg second week
- Avoid active knee flexion beyond 90 degrees
- Start formal Physical Therapy
  - Quad Sets with e-stim and biofeedback
  - Patellar Mobility
  - SLR and Multi-Hip Machine in all four planes
  - Hamstring/ITB and Gastroc/Soleus Stretch
  - Prone hangs for full extension
  - Teach Home Exercise Program
- Start upper body conditioning as tolerated or single leg stationary bike

The hamstrings attach to the posterior portion of the meniscus and therefore, active and resistive hamstring activity should be avoided for at least 6 weeks post-op!

## Phase 2: Weeks 2-4 Post-Op

- Continue non-weight bearing
- ROM exercises: progress to 0-90 degrees
- Continue PT: Modalities as needed
  - Patellar Mobility, Quad Sets with e-stim and biofeedback
  - SLR and Multi-Hip Machine in all four planes, Multi-angle isometrics (0-45deg)
  - Hamstring/ITB and Gastroc/Soleus Stretch, and heel/wall slides for ROM

## Phase 3: Weeks 4-6 Post Op

- Continue non-weight bearing unless otherwise specified by MD
- Progress ROM to 0-120 degrees, may start exercise bike when 110 degrees flexion is reached
- Limit closed chain exercises to 90 degrees
- Low resistance bicycle and EFX/Elliptical Machine on low incline
- Continue PT: Modalities as needed
  - As above, increase isometrics to 0-60 degrees, may add ankle weights for SLR
  - Add Leg Press at 40-90 degrees
  - Weight shifting - lateral, forward/backward
  - Forward step-ups and step overs, wall slides (0-90 deg), mini-squats and calf raises
  - Multi-angle quad isometrics
    - SLR (all 4 planes)
    - Knee extension 90-0 degrees
    - CKC mini-squats 0-45 degrees
    - CKC wall squats
    - CKC weight shifts (diagonal)
    - Balance training (cup walking)
    - Bicycle (once ROM appropriate)
  - Aggressive scar massage at portals and incisions
  - Single leg stance - even and uneven surface, plyoball toss
- Avoid twisting, deep squatting and stooping
- Avoid hamstring curls

## Phase 4: Weeks 6-12 Post-Op

### Goals:

- Full PROM
- No swelling/inflammation
- Re-establish muscle control
- Proper gait pattern

### Protocol:

- Weight bearing as tolerated
- Progress ROM to full as tolerated (Stretching, prone hangs, and patellar mobs as needed)
- Increase closed chain exercises to 120 degrees AFTER WEEK 8
- Continue EFX/Elliptical/Bicycle
- Continue PT:
  - Progress balance training (single leg, plyotoss, wobble board)
  - May add gentle knee extensions 30-90 deg
  - Advance leg press to single leg as tolerated
  - Standing squats advance to single leg and single leg wall squats as tolerated
  - Add dumbbell to step-up's and lunges as tolerated
  - Progress strengthening exercises
    - Hip Abd/Adduction
    - Lateral step-ups
  - Balance/proprioception training
    - Biodex stability
    - Squats rocker board
    - Cup walking
  - Bicycle (if ROM permits)
  - Pool program
  - Start Hamstring curls at week 7
  - Continue modalities and scar treatment as needed
- Avoid twisting, pivoting, running and deep squatting

## Phase 5: Week 12-16

### Goals:

- Improve strength and endurance
- Maintain full ROM
- Gradually increase applied stress

### Protocol:

- Continue with above stretching and strengthening program 3X/week focusing on increasing intensity and decreasing reps (6-10) for increased strength
- Initiate lateral movements and sports cord: lunges - forward, backward, or sidestep with sports cord, lat step-ups with sports cord, step over hurdles.
- Progress to isotonic strengthening program
- Start Jogging and pyometrics program (squat jumps, box jumps, tuck jumps, scissor hops, etc.)
- Swimming and kicking is OK
- Leg circuit: squats, lunges, scissor jumps on step, squat jumps
- Power skipping, Bounding in place and for distance
- Quick feet on step - forward and side-to-side - use sports cord
- Progress lateral movements - shuffles with sports cord; slide board
- Ladder drills
- Focus should be on quality, NOT quantity
- Landing from jumps is critical - knees should flex to 30° and should be aligned over second toe
- Controlling valgus will initially be a challenge and unilateral hops should not be performed until this is achieved
- Initiate Sprints and all cutting drills (Straight line, then figure 8's, circles, then 45 deg turns, and finally 90 deg cuts and carioca's)

## Phase 6: Return to Activity/Sports (Months 4-6)

### Goals:

- Improve strength and endurance
- Prepare for unrestricted activities

### Criteria to progress to Phase 6:

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

*Exercises:*

- Continue and progress all strengthening exercises and stretching drills
- Deep squatting permitted at 4 months
- Initiate straight line running at 4 months
- Initiate pivoting and cutting at 5 months
- Initiate agility training at 5 months
- Gradually return to sports at 6 months
- Advanced weight training and sports specific drills are advised to maintain a higher level of competition.
- Isokinetic testing at 6 and 12 months may be recommended to guarantee maintenance of strength and endurance.

These are general guidelines, which may be altered according to the judgment of the surgeon and physical therapist.