

# **Meniscus Repair**

## **Rehabilitation Protocol**

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for Sports Medicine  
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### **Introduction:**

- This rehabilitation protocol was developed for patients who have isolated meniscal repairs. Depending upon the complexity of the tear and location of the repair, the weight bearing status post-operatively as well as the progression of rehabilitation will vary.

### **Goals of rehabilitation are to:**

- Control joint pain, swelling, hemarthrosis
- Regain normal knee range of motion
- Regain a normal gait pattern
- Regain normal lower extremity strength
- Regain normal proprioception, balance, and coordination

The physical therapy is to begin post-op day #3-5. It is extremely important for the supervised rehabilitation to be supplemented by a home fitness program.

### **Important post-op signs to monitor:**

- Swelling of the knee or surrounding soft tissue
- Abnormal pain response, hypersensitive
- Abnormal gait pattern, with or without assistive device
- Limited range of motion
- Weakness in the lower extremity musculature

### **Return to activity:**

- It requires both time and regular clinic evaluation to safely and efficiently return to functional activity.
- Adequate strength, flexibility, and endurance are all necessary to return to high level function, all of which are addressed in this program.
- Isokinetic testing and functional evaluation are required to assess a patient's readiness to return to sport.
- Return to intense activities such as impact loading, jogging, deep knee flexion, or pivoting and shifting early post-operatively may increase the overall chance of a repeat meniscal tear and symptoms of pain, swelling, or instability should be closely monitored by the patient.

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### Phase 1: Week 1-2

#### **Range of Motion:**

- Passive, 0-90°
- Patellar mobs
- Ankle pumps
- Gastroc/soleus stretch
- Hamstring/ITB stretch
- Prone hangs to facilitate extension

#### **Strength:**

- Quad sets with E-stim/biofeedback
- SLR in 4 planes
- SAQ
- Multi-hip machine in 4 planes
- Hip flexion-seated
- Multi-angle isometrics (0-60°)

#### **Weight Bearing:**

- Toe touch weight bearing in brace, locked in full extension with crutches

#### **Modalities:**

- E-stim/biofeedback as needed
- Ice 15-20 minutes with 0° knee ext

#### **Brace:**

- Remove brace to perform ROM activities
- Brace with crutches
- Brace locked at 0° ext to protect repair

#### **Goals for Phase 1:**

- Control pain, inflammation, and effusion
- Adequate quad/VMO contraction
- Independent in HEP
- TDWB to PWB as noted by Dr. Adickes

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### Phase 2: Week 2-4

#### **Range of Motion:**

- Passive, 0-120°
- Patellar mobs
- Gastroc/soleus stretch
- Hamstring/quad/ITB stretch
- Prone hang as needed
- Heel/wall slides to reach goal

#### **Strength:**

- Quad sets with biofeedback
- SLR in 4 planes with ankle weight
- Multi-angle isometrics (0-60°)
- Knee extension (90-30°)
- Heel raises/Toe raises
- Leg Press (110-40°)
- Wall squats

#### **Balance Training:**

- Weight shift (side/side, fwd/bkwd)
- Single leg balance
- Cup walk/Hesitation walk

#### **Weight Bearing:**

- PWB to FWB with crutches as tolerated
- Dependent upon Dr. Adickes

#### **Bicycle:**

- May initiate bike when 110° flex is reached
- DO NOT use bike to increase flexion

#### **Modalities:**

- Biofeedback as needed
- Ice 15-20 minutes

#### **Brace:**

- WBAT in brace
- Opened to 30° at wk 2, 60° at wk3, 90° at wk 4
- Opened to full ROM at wk 5

#### **Goals for Phase 2:**

- ROM 0-120°
- Adequate quad/VMO contraction
- Control pain, inflammation, and effusion
- PWB to FWB with quad control

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### Phase 3: Week 4-12

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#### **Range of Motion:**

- Passive, 0-135° (full)
- Gastroc/soleus stretch
- Hamstring/quad/ITB stretch
- Prone hang to reach goal as needed
- Patellar mobs

#### **Strength:**

- Bicycle/EFX
- SLR in 4 planes with ankle weight/tubing
- Mini-squats/Wall squats
- Knee extension (90-30°)
- Hamstring curl (0-90°)
- Leg Press-single legged eccentric
- Smith Press-double legged
- Isokinetic training at high speeds (180-360°/sec)
- Multi-hip machine in 4 planes
- Lateral/Forward step-up/down
- Heel raise/Toe raise
- Lunges-knee not to migrate over toe

#### **Balance Training:**

- Single leg balance with plyotoss
- Sports cord agility work
- Wobble board work
- ½ Foam roller work

#### **Weight Bearing:**

- FWB by wk 4

#### **Brace:**

- As needed at wk 6

#### **Modalities:**

- Ice 15-20 minutes as needed

#### **Goals for Phase 3:**

- ROM 0-135°
- Full weight bearing
- Control pain, inflammation, effusion
- Increase lower extremity strength and endurance
- Enhance proprioception, balance, and coordination
- Complete readiness for sport specific activity

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### **Phase 4: Week 12-36**

#### **Range of Motion:**

- Continue all stretching activities

#### **Strength:**

- Continue all exercises from previous phases

#### **Running Program:**

- Water walking
- Swimming (kicking)
- Backward run

#### **Cutting Program:**

- Lateral shuffle
- Carioca, figure 8's

#### **Functional Training:**

- Initiate light plyometric program
  - box hops, level, double-leg
- Sport specific drills

#### **Modalities:**

- Ice 15-20 minutes as needed

#### **Goals for Phase 4:**

- Enhance neuromuscular control
- Progress skill training
- Perform selected sports specific activity-unrestricted sporting activity
- Achieve maximal strength and endurance

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.