



## **BRIGHAM AND WOMEN'S HOSPITAL**

A Teaching Affiliate of Harvard Medical School  
75 Francis St., Boston, Massachusetts 02115

### **Department of Rehabilitation Services** Physical Therapy

This protocol has been adopted from Brotzman & Wilk, which has been published in Brotzman SB, Wilk KE, *Clinical Orthopaedic Rehabilitation*. Philadelphia, PA: Mosby Inc; 2003:315-319. The Department of Rehabilitation Services at Brigham & Women's Hospital has accepted this protocol as our standard protocol for the management of patients s/p meniscal repair.

## **Meniscal Repair:**

The intent of this protocol is to provide the clinician with a guideline of the post-operative rehabilitation course of a patient that has undergone a meniscal repair. It is no means intended to be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam/findings, individual progress, and/or the presence of post-operative complications. If a clinician requires assistance in the progression of a post-operative patient they should consult with the referring Surgeon.

### **Progression to the next phase based on Clinical Criteria and/or Time Frames as Appropriate.**

Key Factors in determining progression of rehabilitation after Meniscal repair include:

- Anatomic site of tear
- Suture fixation (failure can be caused by too vigorous rehabilitation)
- Location of tear (anterior or posterior)
- Other pathology (ligamentous injury)

### **Phase I –Maximum Protection- Weeks 1-6:**

#### **Goals:**

- Diminish inflammation and swelling
- Restore ROM
- Reestablish quadriceps muscle activity

### **Stage 1: Immediate Postoperative Day 1- Week 3**

- Ice, compression, elevation
- Electrical muscle stimulation
- Brace locked at 0 degrees
- ROM 0-90

## **Mensical Repair Protocol**

Copyright © 2007 The Brigham and Women's Hospital, Inc. Department of Rehabilitation Services. All rights reserved.

- Motion is limited for the first 7-21 days, depending on the development of scar tissue around the repair site. Gradual increase in flexion ROM is based on assessment of pain and site of repair (0-90 degrees).
- Patellar mobilization
- Scar tissue mobilization
- Passive ROM
- Exercises
  - Quadriceps isometrics
  - Hamstring isometrics (if posterior horn repair, no hamstring exercises for 6 weeks)
  - Hip abduction and adduction
- Weight-bearing as tolerated with crutches and brace locked at 0 degrees
- Proprioception training with brace locked at 0 degrees

### **Stage 2: Weeks 4-6**

- Progressive resistance exercises (PREs) 1-5 pounds.
- Limited range knee extension (in range less likely to impinge or pull on repair)
- Toe raises
- Mini-squats less (than 90 degrees flexion)
- Cycling (no resistance)
- PNF with resistance
- Unloaded flexibility exercises

### **Phase II: Moderate Protection- Weeks 6-10**

#### **Criteria for progression to phase II:**

- ROM 0-90 degrees
- No change in pain or effusion
- Quadriceps control (MMT 4/5)

#### **Goals:**

- Increased strength, power, endurance
- Normalize ROM of knee
- Prepare patients for advanced exercises

#### **Exercises:**

- Strength- PRE progression
- Flexibility exercises
- Lateral step-ups
- Mini-squats

## **Mensical Repair Protocol**

Copyright © 2007 The Brigham and Women's Hospital, Inc. Department of Rehabilitation Services. All rights reserved.

**Endurance Program:**

- Swimming (no frog kick), pool running- if available
- Cycling
- Stair machine

**Coordination Program:**

- Balance board
- Pool sprinting- if pool available
- Backward walking
- Plyometrics

**Phase III: Advanced Phase- Weeks 11-15****Criteria for progression to phase III:**

- Full, pain free ROM
- No pain or tenderness
- Satisfactory clinical examination
- SLR without lag
- Gait without device, brace unlocked

**Goals:**

- Increase power and endurance
- Emphasize return to skill activities
- Prepare for return to full unrestricted activities

**Exercises:**

- Continue all exercises
- Increase plyometrics, pool program
- Initiate running program

**Return to Activity: Criteria**

- Full, pain free ROM
- Satisfactory clinical examination

**Criteria for discharge from skilled therapy:**

- 1) Non-antalgic gait
- 2) Pain free /full ROM
- 3) LE strength at least 4/5
- 4) Independent with home program
- 5) Normal age appropriate balance and proprioception
- 6) Resolved palpable edema

**Mensical Repair Protocol**

Copyright © 2007 The Brigham and Women's Hospital, Inc. Department of Rehabilitation Services. All rights reserved.