BRIGHAM AND WOMEN'S HOSPITAL
A Teaching Affiliate of Harvard Medical School
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Department of Rehabilitation Services
Physical Therapy

This protocol has been adopted from Brotzman & Wilk, which has been published in Brotzman SB, Wilk KE, *Clinical Orthopeadic 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

    - 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

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