



Central Indiana Orthopedics

INVESTED IN KEEPING YOU ACTIVE

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MENISCUS REPAIR REHABILITATION PROTOCOL

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 by 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 please consult with Dr Camilleri.

Please reference the exercise progression sheet for timelines and use the following precautions during your treatments. Thank you for progressing all patients appropriately and please fax all progress notes to Dr. Camilleri's office or hand deliver with the patient. Successful treatment requires a team approach and we value your care for the patient as well as your input. Please contact Dr. Camilleri at any time with your input on how to improve the therapy protocol.

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
 - Full extension that is symmetric to the non-operative side is paramount
- Reestablish quadriceps muscle activity (symmetric to non-operative side!)

Stage 1: Immediate Postoperative

Day 1- Week 3

- Weight Bearing: 50% (progress to 75% as tolerated)
- Brace: locked at 0 degrees at all times
- Ice, compression, elevation
- Electrical muscle stimulation
- 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 (no greater than 90 degrees)
- Exercises
 - Quadriceps isometrics
 - Avoid hamstring exercises for first 6 weeks
 - Hip abduction and adduction
- Proprioception training with brace locked at 0 degrees

Stage 2: Weeks 4-6

- Weight Bearing: may progress to full weight bearing with crutch assist as tolerated
- Brace: **locked at 0 degrees at all times until end of Week 4, can then be locked from 0-90 degrees. Brace can be discontinued at the end of Week 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
- Begin hamstring work
- Focus on core/glute/hip/quad strength
- Proprioception/balance exercises
- Flexibility exercises
- Lateral step-ups
- Mini-squats

Endurance Program:

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

Coordination Program:

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



**Phase III: Advanced Phase
Weeks 11-15**

Criteria for progression to phase III:

- Full, pain free ROM
- No pain or tenderness
- Satisfactory clinical examination
- **Clearance from Dr Camilleri**
- 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
- Initiate plyometrics
- Increase pool program
- Initiate running program

Return to Activity Criteria:

- Full, pain free ROM
- Satisfactory clinical examination



**Phase IV: Sport Specific Phase
Months 4-6**

- Initiate sport specific drills
 - Cutting/pivoting/twisting/turning
 - High velocity movements
- Increase plyometrics
- Gradual return to athletic activity as tolerated
- Maintenance program for strength/endurance

Criteria for Final Clearance for Sport:

- Symmetric range of motion
- Isokinetic testing (Cybex) at 180/sec and 60/sec that is 90% compared to non-operative leg
- Single leg hop test that is 90% compared to non-operative leg
- Final clearance given by both physical therapist and Dr Camilleri

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