

The following protocol is intended as a guide for post-operative meniscal repair rehabilitation. This does not represent a fully inclusive list of all interventions that can be used in the rehab process, and the therapist should use their clinical experience/judgment to help guide their patient through their recovery, consulting with the referring physician should questions arise.

### **Meniscal repair post-op protocol:**

General Goals:

1. Protect healing repair and enhance remodeling
2. Attain full ROM (extension focus)
3. Restore patellar mobility
4. Reestablish full neuromuscular control/strength
5. Facilitate return to sport

### **Day 1 post-op : First therapy visit**

Medical Care:

- Dressing Change

Exercises:

- Quad sets
- Adductor isometrics
- Ankle pumps
- Heel slides (strap assist); ROM 0-90 degrees, being careful not to force flexion
- Calf stretching
- Gentle hamstring stretching

Modalities:

- Modalities for pain/inflammation control (cryotherapy/vasopneumatic compression, TENS)

Ambulation/Brace:

- WB 0-25% with brace locked in full extension
- Sleep with brace locked in full extension

### **Rehabilitation: Day 2 – Week 6**

Goals:

1. Decrease effusion and pain
2. Restore patellar mobility
3. Increase knee ROM (0-90 degrees); emphasize full knee extension immediately
4. Gradually increase weight bearing/ambulatory function per below guidelines
5. Protect repair and enhance remodeling
6. Facilitate increased muscle tone/control

Medical Care:

- Monitor wound healing

Manual P.T. :

- Knee extension PROM

- Patellar mobilizations

Exercises:

- Self knee extension stretching:
  - Foam roll under heel +/- weight
  - Prone hangs
  - Patient education
- Heel slides with strap within the limits of 0-90° x 6 weeks
- SLR (flexion, extension, abduction, adduction) with brace locked in full extension if a quad lag exists. Discharge use of brace for leg raises and add weight as quad control improves.
- Continue with quad and hip adductor isometrics
- No isolated isotonic hamstring strengthening for 6 weeks
  - Initiate knee flexion AROM against gravity week 2-4 depending on swelling, pain and ROM
- Calf stretching
- Hamstring stretching
- Bike
  - Only allowed on an adjustable bike maintaining 0-90 degree restrictions X 6 weeks

Modalities:

- Modalities for pain/inflammation control (cryotherapy/vasopneumatic compression, TENS)
- NMES to help decreased quad inhibition

Ambulation:

- Week 2: 0-25% WB with brace locked in 0 degree extension
- Week 3-4: 25-50% WB with brace locked in 0 degree extension
- Week 5-6: 50-75% WB with brace locked in 0 degree extension
- Sleep with brace based on therapist discretion
- Emphasize normal gait pattern

**Rehabilitation: Weeks 7 – 12**

Goals:

1. Resolution of pain with ADLs
2. Resolution of edema
3. Normalization of knee ROM
4. Normal gait pattern
5. Develop strength and power in lower extremities (5/5 MMT)
6. Advance proprioceptive and neuromuscular skills
7. Increase overall conditioning/endurance
8. Closed chain focus for rehabilitation

Manual P.T.:

- Continue with patellar mobilization and PROM PRN

Exercises:

- Continue with self knee extension ROM exercises
- Progress knee flexion ROM to full
- Continue to progress the strengthening exercises from weeks 0-6 as tolerated

- Stationary bike to full ROM with gradually increasing time and intensity
- Gait training
- Progressive closed chain strengthening-leg press, wall slides, single leg deadlifts
- Progressive isolated hamstring strengthening starting at week 6
- Initiate bilateral proprioceptive exercises-progressing to SL proprioceptive exercises

#### Ambulation:

- Progress gradually to full weight-bearing during weeks 7-8 post op with brace opened gradually
- D/C brace with ambulation once gait pattern is normalized
- Reciprocal pattern up and down stairs

#### **Rehabilitation: Weeks 13-24**

##### Goals:

1. Maximize strength and LE power
2. Normal neuromuscular control
3. Progress to sport specific/plyometric training
4. Return to sport

#### Jogging:

- Initiate at 4 months post-op if ROM and flexibility are WNL's, strength is adequate and pain allows

#### Exercises:

- Continued strengthening program
- Continued proprioceptive program
- Initiate agility/plyometrics at 5 months post-op
  - Start with 2 legged activities progressing to single leg activities
  - Forward/back to lateral motions (shuffle, carioca, hopping)
  - Start with 25-50% intensity and progress gradually
- Deceleration activities at 5 months post-op
  - Plant with backpedal
- Cutting progression (closer to week 24)
  - Gradually increase speed and angle

#### Return to sport in 9 months + per physician's orders

- Functional testing
- Full ROM
- (-) Laxity
- (-) Pain
- (-) Effusion