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## **Post-operative rehabilitation protocol post meniscus repair**

### **PHASE I (weeks 0 to 2 weeks) immediate post-op**

#### **Goals/Guidelines:**

Range of motion (ROM) minimum: 0° to 90° first 2 weeks postop

Protection –crutches and adherence to postop instructions

Pain, heamarthrosis control - oral medication, ice, elevation of lower limb, AROM

Good patellar mobility

Adequate quadriceps contraction

#### **Exercises:**

- Progression of ROM: 1<sup>st</sup> day post-op – PROM knee flex, PROM/AROM/AAROM knee ext. \*\* avoid AROM flexion initially to avoid hamstring strain on posteromedial joint, avoid hyperextension with anterior horn repairs.
- Hamstring and gastroc/soleus flexibility
- Open chain kinetic exercises – multiangle quad isometrics, SLR if no quad lag, add SLR in ext, add, abd planes if no quad lag
- AAROM extension 90-0 deg (90-30 if anterior horn repair)

#### **For progression to next phase:**

1. ROM 0 – 90 degrees
2. Adequate quadriceps activation (no quad lag)
3. Pain, inflammation controlled
4. Good patellar mobility.

### **PHASE II (weeks 3 to 6)**

#### **Goals/Guidelines:**

50% weightbearing or foot to floor WB depending on post op instructions (based on size and location of tear) - **DC crutches at 6 weeks**

Cryotherapy post exercise, oral medication as needed

Patellar mobilization

ROM: 120 deg by week 3-4, 135 deg by week 5-6.

**Exercise:**

- AAROM/PROM as needed based on limitations, prone knee hangs, heel/wall slides as need to progress ROM
- Knee extension, AAROM/AROM, 90°-0° (90°-30° anterior horn repairs)
- NMES - multi-angle quadriceps isometrics, OCK quads
- Flexibility of hams, gastroc/soleus, hip mm
- Multiplane hip ex – SLR in flex, ext add, abd plane (no quad lag)
- Hamstring curls, peripheral repairs (0°-90°)
- Can use stationary bike if >110 deg flexion, do not use to gain flexion ROM

**For progression to next phase:**

1. ROM 0 – 135 degrees
2. Pain, inflammation controlled
3. Good patellar mobility
4. Toe touch to 50% weightbearing (dependent on tear)- prep for DC crutches
5. Independent in HEP

**Phase III (weeks 7-12)**

**Goals/Guidelines:**

DC crutches

Continue cryotherapy as needed

Gait retraining

Balance and proprioception progression

Strength progression

Return to ADLs

**Exercise**

- Open and closed chain kinetic exercises – toe raises, heel raises, wall squats above 60 degrees, mini squats – hip and quad control focus, hamstring curls, leg press
- Progression of resisted hip exercises, progression to functional ex in standing (mini squats, wall squats, sidesteps, step ups/downs and lunges with focus on movement pattern)
- Standing – heel and toe raises
- Progression of double leg balance
- Gait retraining
- Address movement pattern abnormalities and muscle imbalances

**For progression to next phase:**

No effusion, painfree ROM

Normal range of motion

No problem with ADLs

Normal gait, without pain

## **Phase IV (week 12+)**

### **Goals/Guidelines:**

Developing lower extremity strength, balance, proprioception and endurance, sport specific training.

### **Exercise**

- Can begin running program as tolerated at 20+ weeks
- Crosstraining for cardiovascular endurance
- Progression of double leg balance/proprioception and single leg balance/proprioception, perturbation training
- Sport specific – 20-24 weeks for plyometrics, cutting, agility

### **For progression to next phase:**

No pain or effusion

All ADL's painfree

>20 min walk painfree

## **Phase V (week 27+)**

Return to activity at 6-9 months for peripheral repairs, 9-12 months for complex, all –inside and radial repairs. Condition of articular cartilage may also impact functional progression.

Week 24+ complex tears return to running progression

Week 30 complex tears return to cutting, agility, sport specific

### **Criteria for Return to Sport**

No knee joint pain or swelling

Full range of knee motion

Less than or equal to 10% deficit of quadriceps and hamstrings strength

Less than or equal to 15% deficit of lower limb symmetry single-leg hop testing

Successful completion running and functional training

Thorough trial of return to sport with monitoring for overuse symptoms

Patient education – return for re-evaluation in future if knee problems occur