Sheffield Children's NHS
NHS Foundation Trust

Meniscal Repair Rehabilitation Guideline

Reference:	1946v1
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Purpose

To guide rehabilitation following meniscal repair.

Intended Audience

Orthopedic Surgeons and physiotherapists

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1. Introduction

Guidelines for physiotherapists involved in the rehabilitation of patients after meniscal repair.

2. Guideline Content

Meniscal Repair Rehabilitation Guidelines

Rehabilitation guidelines for meniscal repair only

The information given below is a guideline of the appropriate management for rehabilitation following meniscal repair.
The essence is to protect the repair during all phases with a graduated exposure to increasing loads
It is your responsibility to evaluate each individual patients problems and clinical reasoning must be applied to inform decisions on progression, rather than timescale alone. Use professional judgment as patients progress. Even if an exercise or activity is listed at a particular time frame, some patients may not be ready to perform it.
Early return to high level activity runs a definite risk of re-injury
Patients heal at different rates and rehab needs to be delayed or adjusted accordingly.

The key to a successful outcome is a phased rehabilitation with criteria based progression not time dependent progression.

If at any times you have concerns regarding a patient's progression or lack thereof or any symptomatic changes please confer with a senior clinician or contact us at the Sheffield Children's NHS Foundation Trust.

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Possible problem	**Action**
Uncontrolled pain (>3/10 VAS)	Regular analgesia Ice & elevation Protected weight bearing Modification of activity level
Excessive swelling (>2cm side to side difference sup patella level)	Ice & elevation Protected weight bearing Modification of activity level Decrease number of exercises
Unable to regain passive knee extension (should be full by ~ 4 weeks)	gravity assisted pass stretch (GAPS) / Prone hangs Hamstring and gastroc stretches Static quads contractions (+/- electrical stim) Control knee swelling
Poor quadriceps contraction / weakness	Control knee swelling Control pain Compliance with exercise Static quads contractions (+/- electrical stim)
Anterior Knee Pain	Control knee swelling Address muscle length (esp rec fem) Taping / patello femoral joint (PFJ) mobs Alignment assessment
Patient complains of "giving way"	Early stages this can be due to quads weakness (hyperextension) Refer back to clinic / not resolving

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PHASE 1 (post-op weeks 0 to 5)

Goals

1. Pain control (VAS <3/10)
2. Swelling controlled (<2cm difference at superopatella level)
3. Good gait pattern NWB/PWB crutches (for first 2-4 weeks)
    a. consider locking brace in full extension for mobilisation – esp. If poor quads control
4. ROM brace limited 0-30° – work to 90° over 4-6 weeks
5. Good static quads contraction

Restrictions:
1. No flexion beyond 90°
2. No deep loaded flexion

ROM
1. Gravity Assisted Passive Stretch (GAPS) to increase extension
2. Stretches (gastroc. / soleus / hamstring / quadriceps)
3. Patella mobilizations inferior and superior,

Treatment

Strength:
1. Quad sets (SQC, SLR, IRQ)
2. Active assisted ROM heel slides (knee movement re-education),
3. Calf raises
4. Mini squats
5. Active glutes/hip exercises
6. **Care with Hamstring strengthening due to its attachment to the posterior portion of the meniscus, therefore, resistive hamstring activity should be avoided for 6 weeks post-op.**
7. Static Bike may be considered if patient is PWB but **only on elliptical machine** with altered knee angle
8. As weight bearing changes wean from crutches

Balance
1. Gym ball compressions in lying and sitting

Modalities
1. Electrical stimulation of quadriceps (if available)
2. Ice pack

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Phase 2 Post Op weeks 6-10

Goals

1. ROM
    a. Full extension
    b. Flexion to 120°

2. Good Gait pattern
3. Good quads activation
4. SLR with no lag
5. Swelling controlled (<1cm difference at superopatella level)

Restrictions:

1. No deep flexion
2. No loaded flexion beyond 60°

Treatment

Strength

1. Limited arc closed chain strengthening (max 60° at week 6 to 90° at week 10)
2. Step ups
3. Step downs
4. Side stepping
5. OCK and CCK exercises to max flexion $60^{o\ wk6}$ to $90^{o\ wk\ 10}$

Balance

1. Proprioceptive exercises (e.g. rocker board working toward wobble board then on to single leg stance)
2. Hurdle/cone step-overs
3. Wobble board STS
4. Walking pace ladder and cone drills
5. Gym ball compressions in lying and sitting and off a step using handrails

Cardiovascular

1. Static bike (elliptical machine with knee angle to 60° initially)
2. Treadmill walking
3. Swimming (straight leg kicking only, no breast stroke)

Modalities

1. Electrical stimulation of quadriceps
2. Ice pack

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Phase 3 Post Op weeks 11-16

Goals

1. ROM
    a. Full extension
    b. Full Flexion
2. Good Gait pattern
3. Good quads activation
4. SLR with no lag
5. Swelling controlled (<1cm difference at superopatella level)
6. High level proprioceptive work

Treatment
ROM

1. Stretches (gastroc / soleus / hamstring / quadriceps)

Strength

2. Bridging on gym ball (& rolling ball forwards and back)
3. Leg press 90 - 10°
4. Knee extension with resistance 90 – 120°
5. Multi hip machine
6. Hamstring curls
7. Plyometrics (box jumps, 2 legs, 1 legs)

Cardiovascular

1. Static bike
2. Gentle jogging (change of direction & agility drills with caution)
3. Swimming (straight leg kicking only, no breast stroke)

Balance

1. Wobble board single leg (+/- external challenge, ball etc)
2. Trampet
3. 1 leg hops forwards / lateral (+/- theraband)
4. Sit to stand on wobble board

Modalities

1. Ice pack

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Final Phase 17 weeks+

General Observations:

1. No swelling, pain free ROM, stable joint
2. ROM full

Goals:

1. ROM full
2. No patellofemoral symptoms
3. Hop index >at least 85%
4. Lysholm score >95%, IKDC 85%
5. Limb Symmetry index evaluation
6. Return to previous activity

Treatment

1. Agility drills gradual return to normal pace
2. May commence pivoting and cutting gradual increase in speed
3. Early football drills
4. Running on treadmill
5. Rower / stepper / Cross Trainer
6. Treadmill running progressing to sprint drills (consider an incline to maintain knee cushioning)
7. May commence early contact drills

Any problems with the patient following the guideline must be clearly documented along with any explanations.

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