



REHABILITATION GUIDELINES

KNEE MENISCUS REPAIR

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CLINICAL NURSE

Eileen Perri, BSN
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The intent of this protocol is to provide the therapist with guidelines of the post-operative rehabilitation course after a meniscal repair. It should not 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. The therapist should consult the referring physician with any questions or concerns.

INDIVIDUAL CONSIDERATIONS:

PHASE I (0-4 weeks)

Goals

- Control inflammation and pain
- Full active extension and 90 degrees of flexion
- Achieve quadriceps control

Brace

- Brace 0-90° for 6 weeks post-op.
- Locked straight for ambulation for 4 weeks
- May remove for sleep after two weeks
- May remove for exercises

Weight-Bearing Status

- Weight bearing as tolerated

Restrictions

- No Running, Jumping, Squatting, Kneeling, or Pivoting



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Therapeutic Exercises

- Straight leg raises in all planes (use brace locked in extension initially until quad strength is good enough to prevent an extension lag)
- Heel slides to <90 degrees of flexion, calf pumps, quadriceps sets
- Electrical stimulation
- Patellar mobilization
- Week 4+: Stationary bike (seat high, low tension)

PHASE II (5- 8 weeks)

Criteria to advance from Phase I→II

- Good quad set, straight leg raise without extension lag
- 90 degrees of knee flexion
- Full extension

Goals

- Progress weight-bearing
- Restore full range of motion

Brace/Weight-bearing status

- WBAT, brace may be unlocked 0-90 degrees.
- Week 6-7: Full weight bearing and discontinue brace as soon as normal gait pattern/quad control is achieved

Restrictions

- No Running, Jumping, Twisting, Kneeling, Pivoting, or Squatting>45°

Therapeutic Exercises

- Mini-squats (0-45 degrees)
- Stationary Bike (high seat, low tension)
- Prone leg hangs
- Closed chain extension (leg press:0-45 degrees)
- Pool walking/jogging
- Toe raises
- Hamstring and gastroc/soleus stretches
- StairMaster



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- Proprioception
 - Mini-tramp standing
 - Unstable platform (BAPS) with eyes open and closed
 - Standing ball throwing and catching

PHASE III (8-12 weeks)

Criteria to advance from Phase II→III

- Normal gait
- Full range of motion (avoid hyperflexion loading)
- Sufficient strength and proprioception to initiate functional activities

Goals

- Improve confidence in the knee
- Progress with strength, power, and proprioception

Restrictions

- No Jumping, Twisting, Kneeling, Pivoting, or Squatting>90°

Therapeutic Exercise

- Continue with flexibility exercises
- Advance closed chain kinetic strengthening (two-leg squats to <90 degrees, leg press 0-60 degrees)
- Avoid single-leg squats
- StairMaster, elliptical trainer, cross-country ski machine
- *Functional Training (6-12 weeks)*
 - Running
 - *See below*
 - Swimming
 - Avoid frog kick
 - Plyometrics
 - *See below*
 - Proprioception
 - Mini-tramp bouncing
 - Lateral slide board
 - Ball throwing and catching on unstable surface



PHASE IV (3 months+)

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Criteria to advance from Phase III→IV

- Full, pain-free range of motion
- No patellofemoral irritation
- Sufficient strength and proprioception to progress to recreational activities

Goals

- Return to athletic activity by 4 months

Restrictions

- Avoid hyper-flexion and squatting >90°

Therapeutic Exercises

- Progress with flexibility and strengthening program
- Plyometrics for speed and power
- Continue running
- Incorporate cutting drills into agility training
- Advance heights with plyometric conditioning
- Sports specific drills (start a 25% on speed and advance as tolerated)

Criteria for Return to Sports

- Full range of motion
- No effusion
- 90% hamstring and quadriceps strength compared to contralateral side
- Clearance from doctor prior to return to sport

5 MONTHS Resume athletic activities

6 MONTHS Allow hyperflexion at this time



REHABILITATION GUIDELINES

RETURN TO RUNNING PROGRAM

PHASE I – Warm Up Walk 15 Minutes, Cool Down Walk 10 Minutes

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Day	1	2	3	4	5	6	7
Week 1	W5/J1x5*		W5/J1x5		W4/J2x5		W4/J2x5
Week 2		W3/J3x5		W3/J3x5		W2/J4x5	
Week 3	W2/J4x5		W1/J5x5		W1/J5x5		Return to Run

Key: W=walk, J=jog

*W5/J1x5= Walk (5 minutes), Jog (1 minute); repeat 5 times

PHASE II – Warm Up Walk 15 Minutes, Cool Down Walk 10 Minutes

Week	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	20 min		20 min		20 min		25 min
2		25 min		25 min		30 min	
3	30 min		30 min		35 min		35 min
4		35 min		40 min		40 min	
5	40 min		45 min		45 min		45 min
6		50 min		50 min		50 min	
7	55 min		55 min		55 min		60 min
8		60 min		60 min			

- Recommendations:
 - Runs should occur on softer surfaces during Phase 1
 - Non-impact activity on off days
 - Goal is to increase mileage and then increase pace; avoid increasing two variables at once
 - 10% rule: no more than 10% increase in mileage per week



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AGILITY AND PLYOMETRICS PROGRAM

This program is designed as a guide for clinicians and patients through a progressive return-to-run program. Patients should demonstrate > 80% on a Functional Assessment and started a running program prior to initiating this program (after lower extremity surgery).

PHASE I: ANTERIOR PROGRESSION

Goals:

- Safely recondition the knee
- Provide a logical sequence of progressive drills for pre-sports conditioning

Agility:

- Forward run
- Backward run
- Forward lean in to a run
- Forward run with 3-step deceleration
- Figure 8 run
- Circle run
- Ladder

Plyometrics:

- Shuttle press: Double leg → alternating leg → single leg jumps
- Double leg:
 - Jumps on to a box → jump off of a box → jumps on/off box
 - Forward jumps, forward jump to broad jump
 - Tuck jumps
 - Backward/forward hops over line/cone
- Single leg (these exercises are challenging and should be considered for more advanced athletes):
 - Progressive single leg jump tasks
 - Bounding run
 - Scissor jumps
 - Backward/forward hops over line/cone

Criteria to Progress:

- No increase in pain or swelling
- Pain-free during loading activities
- Demonstrates proper movement patterns



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PHASE II: LATERAL PROGRESSION

Goals:

- Safely recondition the knee
- Provide a logical sequence of progressive drills for the Level 1 sport athlete

Agility (*Continue with Phase 1 interventions):

- Side shuffle
- Carioca
- Crossover steps
- Shuttle run
- Zig-zag run
- Ladder

Plyometrics:

- Double leg:
 - Lateral jumps over line/cone
 - Lateral tuck jumps over cone
- Single leg (these exercises are challenging and should be considered for the more advanced athletes):
 - Lateral jumps over line/cone
 - Lateral jumps with sport cord

Criteria to Progress:

- No increase in pain or swelling
- Pain-free during loading activities
- Demonstrates proper movement patterns

PHASE III: MULTI-PLANAR PROGRESSION

Goals:

- Challenge athlete in preparation for final clearance for return to sport

Agility:

- Box drill
- Star drill
- Side shuffle with hurdles

Plyometrics:

- Box jumps with quick change of direction
- 90 and 180 degree jumps

Criteria to Progress:

- Clearance from MD
- Functional Assessment
 - $\geq 90\%$ contralateral side
- Return to Sport Index