



REHABILITATION GUIDELINES

ACHILLES REPAIR

Edward S. Chang, MD
Orthopaedics and
Sports Medicine

OFFICE LOCATIONS

TUESDAY
8100 Innovation Park
Drive
Fairfax, VA 22031
T 703-970-6464
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WEDNESDAY
1005 N. Glebe Rd
Suite 410
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T 571-414-6940
F 703-970-6465

THURSDAY
FRIDAY (AM only)
6355 Walker Lane
Suite 300
Alexandria, VA 22310
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F 703-797-6981

CLINICAL NURSE

Eileen Perri, BSN
(703) 797-6918

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 (0-2 weeks)

Goals

- Protect Repair
- Minimize muscle atrophy in quads, hamstrings, and glutes

Splint

- Cast on at all times

Weight-Bearing Status

- NWB with crutches

ROM

- **Supine passive hamstring stretch**

Therapeutic Exercises

- Quad Sets
- Straight Leg Raises (Do not perform if knee extension lag)
- Hip abduction
- Prone hamstring curls

PHASE II (3-6)

Goals

- Protect repair
- Avoid over-elongation of the Achilles



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- Provide optimal healing at repair site
- Dorsiflexion to neutral

Brace/Weight-Bearing Status

- D/C splint
- Walking boot with heel lift to 30 degrees PF (begin to remove one wedge/week starting Week 6)
- WBAT with crutches

ROM

- Passive Plantarflexion
- AROM/PROM Dorsiflexion to Neutral only (begin week 3)
 - *do not dorsiflex ankle beyond neutral/ 0 degrees
- AROM Inversion/Eversion with ankle PF 30 degrees

Therapeutic Exercises

- Hip and Knee Exercises with no ankle involvement
- Lumbopelvic strengthening- side-lying hip external rotation- clamshell,
- Toe extension to pain free limits

PHASE III (Week 7-10)

Goals

- Continue to protect repair
- Avoid elongation of Achilles tendon
- Achieve typical ROM of ankle in all planes
- Achieve normal gait mechanics

Brace/Weight-Bearing Status

- Full WB with heel lift
- Beginning Week 6, remove one heel lift/week
- Full WB in boot

ROM

- Full PROM in all Planes
- Gentle long-sitting gastroc stretch
- Gentle stretching of quad, hip flexor, hamstrings
- Ankle/foot mobilization (subtalar, midfoot)

Therapeutic Exercise

- Stationary bike with boot and heel pedaling only
- Isometric ankle exercises for DF/inversion/eversion
- 4-way Ankle



PHASE IV (Week 10-12)

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Goals

- Maintain full ROM
- Avoid over-elongation of Achilles
- Safely progress strengthening
- Normalize gait

Brace/Weight-Bearing Status

- Wean to regular shoe Week 10/11

ROM

- Full PROM in all Planes
- Gentle standing gastroc and soleus stretch

Therapeutic Exercise

- Calf raises- concentric (start bilateral and work to unilateral)
- Proprioception
- Continue previous exercises
- Gym: seated hamstring curl, prone hamstring curl, leg press machine
- Stationary bike- heel pedaling only
- Isometric ankle exercises for DF/inversion/eversion

PHASE V (3-5 MONTHS)

Goals

- Safely progress strengthening
- Promote proper movements

ROM

- Standing gastroc and soleus stretch

Therapeutic Exercise

- Continue previous exercises
- Cardio- Elliptical, stair climber
- Calf raises- introduce eccentric (start bilateral and work to unilateral)
- Squat to chair
- Hip hike
- Lateral lunges
- Single leg progression: Partial WB leg press, step-ups, single leg squats, step downs



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PHASE VI (6+ MONTHS)

Goals

- Continue strengthening and proprioceptive exercises
- Initiate jogging and agility program
- Symmetrical performance with sport specific drills
- Safely return to sport

Therapeutic Exercise

- Continue previous exercises
- Return to running program
- Agility and plyometric program

Criteria to RTS

- Clearance from MD
- Functional Assessment
 - Standing heel rise test
 - $\geq 90\%$ compared to contralateral side for RTS



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Return to Running Program

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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 prior to initiating this program (after lower extremity surgery). Specific recommendations should be based on the needs of the individual and should consider clinical decision making. If you have questions, contact the referring physician.

WEDNESDAY
1005 N. Glebe Rd
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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

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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

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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