

Medial Collateral Ligament Sprain

Immediate post-injury phase

- Protection
 - Protected ambulation; partial to full weight-bearing
 - Bracing (As ordered by physician)
 - Grades 1 and 2 with full ROM
 - Grades 2 and 3 with -10 to 75 degrees of motion
- Standard ice, compression, elevation, evaluation for associated injuries

Early post-injury phase

- Continue bracing as described above
- Continued protected ambulation PWB to WBAT
- Modalities as needed (whirlpool, ice, electrical stimulation, biofeedback)
- Exercise
 - Grades 1 and 2
 - Patellar glides and tilts with calf and hamstring stretches
 - Active ROM through pain-free limits
 - Isometrics for quads and hamstrings (PNF and spectrum)
 - Bicycling
 - Resisted hip, ankle, upper body and uninvolved leg exercises
 - Grade 3
 - Patellar glides and tilts
 - AROM -15 to 75 degrees for 4 weeks, then full ROM
 - Isometrics for quads and hamstrings, including PNF's
 - Resisted hip, ankle, upper body, uninvolved leg exercises

Immediate post-injury phase (begin for all grades once full ROM obtained; generally 3-6 weeks)

- Discontinue brace for ADL
- Bicycling with high seat and low resistance; start with 5 minutes and progress
- Flexibility exercises as needed
- Physiologic knee extension (0-45 degrees)
 - Leg press supine with sports cord and leg machine
 - Mini squats
- Resisted knee flexion, hip and ankle exercises
- Proprioception activities (BAPS, proffitter, etc)
- Swimming (free style-no breast-stroke)

Return to sport

- Continue with previous activities to increase flexibility, strength, and muscular and cardiovascular endurance
- Continue proprioceptive activity
- Begin functional strengthening program (sport specific plyometrics program)
 - Slow speed to high speed
 - Bilateral to unilateral support

- Low to moderate heights
- Soft to hard surfaces
- Functional activities progression
 - Walk/jog (flat track)-start at ½ mile, walk curves and jog straightaway-progress to 2 miles
 - Straight jogging (flat track)- start at ¼ mile and progress to 2 miles
 - ¾ speed running (flat track)- start with 20 yard sprints, doing 4-10 reps
 - Full speed sprinting- 20 yard sprints, doing 4-10 reps
 - Backward jogging- 20 yard jog, doing 4-10 reps
 - Backwards ¾ speed running- 20 yard run, doing 4-10 reps
 - Backward sprint- 20 yard, doing 4-10 reps
 - Lateral slides (defensive drills) ½ to ¾ to full speed
 - Zig-zags ½ speed (soft cuts)-5 yard increments for 20 yards, progress 2-5 times
 - Zig-zags ¾ speed (soft cuts)-5 yard increments for 20 yards, progress 2-5 times
 - Zig-zags full speed (soft cuts)-5 yard increments for 20 yards, progress 2-5 times
 - Linebacker drills- ½, ¾, and full speed; backward, forward, side-to-side in 10 yard increments, progress 2-5 times
 - Backward zigzags- ½, ¾, and full speed, 10 yard increments, progress 2-5 times
 - Figure eight's- ½, ¾, and full speed; progress from large circles to smaller circles then to faster speeds, progress 5-10 times
- Criteria for return to sport
 - No signs of inflammation
 - Full ROM and normal flexibility
 - Isokinetic testing- bilateral comparison of peak torque and work within 85% of non-involved limb and ham to quad ratio of 65%
 - Functional tests
 - Vertical jump (bilateral and unilateral comparison)
 - Standing broad jump (bilateral and unilateral comparison)
- Completion of functional progression leading to full participation in sport
- Protective bracing as ordered by physician
 - Lateral knee guards
 - Functional knee braces

Maintenance (continue flexibility and strength training)