

# Hays Medical Center

## MCL Sprain (Grade III)

### General Principles:

This protocol was designed to provide the rehabilitation professional with a guideline of care. It should be stressed that this is only a protocol and should not be a substitute for clinical decision making regarding a patient's progression. Actual progression should be individualized based upon your patient's physical examination, progress, and presence of any complications.

### PHASE I (Immediate)

#### Week 1 - 2

##### Orthotics-

1. Knee Immobilizer until MCL-type functional hinged brace is available
2. Rigid hinged brace may be set to allow 45 to 90 degrees flexion only

##### Weight Bearing-

1. Toe Touch as tolerated with use of crutches

##### Modalities (PRN)-

1. Electrical Stimulation
2. Compression and elevation for pain and edema control
3. Ice for 10-20 minutes post-activity
4. May begin use of heat and/or pulsed Ultrasound after 48 hours

##### ROM-

1. Progress active and passive ROM from 0 to 90 flexion

##### Exercises-

1. Quad sets, Hamstring sets
2. Heel slides / Wall slides to progress ROM within restrictions
3. Prone Hangs, calf and hamstring stretching, heel prop to improve extension
4. Ankle pumps
5. Isometric Quads
  - a. At 30, 60, and 90 flexion
6. May use Electrical stimulation if needed to assist with Quad firing

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## PHASE II (Intermediate)

### Week 3 – 4

#### Orthotics-

1. MCL brace for all weight bearing activity and for exercise
2. ROM in the brace set from full extension to 90 of flexion

#### Weight Bearing-

1. Should progress to full weight bearing with normal gait in brace

#### Modalities (PRN)-

1. Continue Phase 1 modalities as needed

#### ROM-

1. Active and passive ROM from 0 to 90 flexion

#### Exercises-

1. Progress Phase I exercises
2. Initiate straight leg raises (in brace), progress resistance as tolerated
  - a. Flexion, Extension, Abduction
  - b. NO Adduction
3. Eccentric / Concentric Hamstring exercises within ROM restriction
4. Short Arc Quad, progress resistance as tolerated
5. Multi-Hip machine
  - a. Resistance must be kept above knee height

## PHASE III (Strengthening)

### Week 5 – 6

#### Orthotics-

1. MCL brace for all weight bearing activity and for exercise
2. ROM should be gradually increased to full flexion, as tolerated

#### Weight Bearing-

1. Should be full weight bearing with normal gait in brace

#### ROM-

1. Progress active and passive knee ROM to full as tolerated

#### Exercises-

1. Advance Phase II exercises as tolerated
2. Standing proprioception exercises as weight bearing allows
3. Stationary Bike, Elliptical, Nu-Step
4. Closed Chain exercises
  - a. Shuttle / Leg Press (Bilateral only, low resistance)
  - b. Mini-Squats
5. Initiate Isotonic Open Chain hamstring exercises, light resistance

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## Week 7 – 8

### Exercises-

1. Progress closed chain activities to include:
  - a. Step Ups
  - b. Lunges
2. Progress open chain exercises to full arc
  - a. LAQ, LAH
  - b. Weight stations
3. Initiate Isokinetic strengthening
  - a. 180 to 300 degrees per second
4. Begin straight ahead jogging

## PHASE IV (Advanced Strengthening)

### Week 9+

### Orthotics-

1. May discontinue brace for daily activity
2. Continue use of MCL brace for rehabilitation, sport, and high-risk activity

### Exercises-

1. Advance Phase III exercises as tolerated
2. Aggressive Isotonic strengthening
3. Initiate functional sport activity
  - a. Bounding, Jumping, Plyometrics
  - b. Interval Running or sports programs
  - c. Progress to lateral sport movements and cutting activities
  - d. DIME warmup
4. Criteria to be released for return to sport
  - a. Isokinetic Test at 180, 240, and 300 degrees per second for physician review and full release to sport activity (Goal: 90% strength or better)
  - b. Lower extremity functional tests at 90% or better  
(See Lower extremity functional test protocol and form)