

**Ronak M. Patel, MD**

**MCL Non-Operative Treatment  
GRADE I, II, III ISOLATED MCL SPRAIN**

**Rehabilitation Guidelines**

NOTE: The above program may be accelerated for first degree MCL sprains or may be extended depending on the severity of the injury. The below schedules are just guidelines. If there is any increase in pain or swelling or loss of ROM, these can serve as signs that the progression of the patient may be too rapid.

**Phase I – Maximal Protection Phase**

**Goals:**

- Early protected ROM
- Prevent quadriceps atrophy
- Decrease effusion/pain

**Immediate post-injury - Day 1:**

- Ice, compression, and elevation
- Hinged knee brace or immobilizer if needed
- Crutches weight bearing as tolerated
- PROM/AAROM to maintain ROM
- Isometric quadricep sets, flexion SLR's

**Day 2:**

- Continue above
- SLR's (flexion and abduction)
- Hamstring sets
- Whirlpool for ROM(cold for first 3-4 days, then warm)

**Days 3 – 7:**

- Continue as above
- Brace worn at night, brace at day as needed
- Crutches WBA T
- ROM as tolerated
- Eccentric quad work
- Bicycle for ROM stimulus
- Multi-angle isometrics
- Mini-squats and light leg press

**Phase II – Moderate Protection Phase**

**Criteria for progression:**

- No increase in instability

- No increase in swelling
- Minimal tenderness
- PROM 10 - 1000

**Goals:**

- Full painless ROM
- Restore strength
- Ambulation without crutches

**Days 8 – 10:**

- Discontinue crutches if can walk without limp
- Continue ROM exercises(progress to full ROM exercises)
- Continue strengthening program with PRE's (emphasize quadriceps, medial hamstrings and hip abduction)
- Continue multi-angle isometrics
- Closed-chain strengthening (shuttle, leg press, mini-squats, step-ups etc)
- Stationary cycling
- Water exercises, running forward/backward
- Flexibility exercises(hamstrings, quadriceps, iliotibial band, gastrocnemius)

**Days 11 – 14:**

- Continue as week 2
- Initiate isokinetics, sub-maximal progressing to maximal with fast contractile velocities
- Begin running program if full painless extension and flexion are present

**Phase III – Minimal Protection Phase**

**Criteria for progression:**

- No instability
- No swelling/tenderness
- Full painless ROM

**Goal:**

- Increase strength and power **Week 3:**
- Continue strengthening program(emphasis on fast speed isokinetics, eccentric quadriceps, hip abduction, medial hamstrings)
- Isokinetic test
- Proprioception training
- Endurance exercises
- Cross training (cycling, nordic track, stairmaster, swimming)
- Initiate agility program, sport-specific activities (do not progress if pain, limp or undue fatigue)

**Phase IV – Maintenance Phase**

**Week 4 – 8:**

- Continue isotonic/isokinetic strengthening exercises

- Continue flexibility exercises
- Continue proprioceptive activities
- Continue sport specific/agility/running drills

**Return to Competition:**

- When approved by physician
- Full ROM
- No tenderness over MCL
- No instability
- No effusion
- Muscle strength 85% of contralateral side
- Proprioceptive ability satisfactory
- Lateral knee brace (if necessary)