

Palmetto Health USC

ORTHOPEDIC CENTER

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MCL SPRAIN

This program may be accelerated for Grade I MCL Sprains or may be extended depending on the severity of the injury. The follow schedule serves as guidelines to help in the expediency of returning an athlete to his pre-injury state.

Please note that if there is any increase in pain, swelling or loss of range of motion these serve as signs that the progression of the patient may be too rapid.

I. Maximal Protection Phase

Goals: Early protected ROM
 Prevent quadriceps atrophy
 Decrease effusion/pain

Time of Injury: Day One

- Ice, Compression, Elevation
- Knee hinge brace non-painful ROM; if needed
- Crutches, weight bearing as tolerated
- PROM / AAROM to maintain ROM
- Electrical muscle stimulation to quads (8 hours a day)
- Isometrics Quads: Quad sets, Straight Leg Raises (Flex)
- Emphasize:
 - Hamstring Stretches
 - AAROM Knee Flexion stretching to tolerance

Day Two

- Continue above exercises
- Quadriceps sets
- Straight leg raises (Flexion, Abduction)
- Hamstring Isometric Sets

- Well leg exercises
- Whirlpool for ROM (Cold for first 3-4 days, then warm)
- High Voltage Galvanic Stimulation to control swelling

Day Three - Seven

- Continue above exercises
- Crutches- weight bearing as tolerated
- ROM as tolerated
- Eccentric Quad Work
- Bicycle for ROM stimulus
- Resisted Knee Extension with electrical muscle stim
- Initiate hip add, Ext
- Initiate mini-squats
- Initiate Leg press isotonic
- Brace worn at night, brace during day as needed

II. Moderate Protection Phase

Criteria for Progression:

- No increase in instability
- No increase in swelling
- Minimal tenderness
- PROM 10-100 degrees

Goals: Full painless ROM
Restore strength
Ambulation without crutches

Week Two

- Continue strengthening program with PRE's
- Continue electric muscle stim to quads during isotonic strengthening
- Continue ROM exercises and stretching
- Emphasize closed kinetic chain exercises; lunges, squats lateral lunges, wall squats, lateral step-ups
- Bicycle for endurance and ROM stimulus
- Water exercises, running in water forward and backward
- Full ROM exercises
- Flexibility exercises, hamstrings, quads, IT Band, etc.
- Proprioception training (balance drills)
- Stairmaster endurance work

Days Eleven - Fourteen

- Continue all exercises in week two
- PRE's emphasis quads, medial hamstrings, hip abduction
- Initiate Isokinetics, sub-maximal → maximal fast contractile velocities
- Begin running program if full painless extension and flexion are present

III. Minimal Protection Phase

Criteria for Progression:

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

Goals: Increase strength and power

Week Three

- Continue Strengthening Program
 - Wall Squats
 - Vertical Squats
 - Lunges
 - Lateral Lunges
 - Step ups
 - Leg press
 - Knee extension
 - Hip ABD/ADDuction
 - Hamstring Curls
- Emphasis
 - Functional Exercises Drills
 - Fast Speed Isokinetics
 - Eccentric Quads
 - Isotonic Hip ADD, Medial Hamstrings
- Isokinetic Test
- Proprioception Training
- Endurance Exercises
- Stationary Bike 30-40 minutes
- Nordic Trac, Swimming, etc.
- Initiate Agility Program, Sport Specific Activities

Week 8 - 10

- Continue all exercise listed above
- Progress to Fundamental Shoulder Exercises
- Initiate Interval Golf Program (Slow Rate of Progression)

IV. Maintenance Program

Criteria for Progression

- Full ROM
- No instability
- Muscle strength 85% of contralateral side
- Proprioception ability satisfactory
- No tenderness over MCL
- No effusion
- Quad strength; Torque/BW that fulfills criteria
- Lateral knee brace (if necessary)

Maintenance Program

- Continue Isotonic Strengthening Exercises
- Continue Flexibility Exercises
- Continue Proprioceptive Activities