

## **REHABILITATION OF ISOLATED MCL SPRAINS**

This program may be accelerated for Grade I MCL Sprains or may be extended depending on the severity of the injury. The following schedule serves as guidelines to help return the patient to his/her pre-injury state. Please note that if there is any increase in pain or swelling or loss of range of motion these serve as signs that the progression of the patient may be too rapid.

### **MAXIMAL PROTECTION PHASE**

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

#### **A. Time of Injury: Day One**

Ice, compression, elevation

**Hinge knee brace non-painful ROM; if needed (to be determined by physician)**

**Crutches, weight bearing as tolerated**

Passive Range of Motion/Active Assistive Range of Motion 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

#### **B. 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

#### **C. 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 Isotonics

Brace worn at night, brace during day as needed

Continue ROM and stretching exercises

## **II. MODERATE PROTECTION PHASE**

### **Criteria for Progression:**

1. No increase in instability
2. No increase in swelling
3. Minimal tenderness
4. PROM 0-100 degrees

**Goals:** Full painless ROM Restore strength  
Ambulation without crutches

#### **A. Week Two**

Continue strengthening program with PREs

Continue electric muscle stim to quads during isotonic strengthening

Continue ROM exercises and stretching  
Emphasize closed kinetic chain exercises; lunges, squats, 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  
lateral lunges, wall

#### **B. Days Eleven - Fourteen**

Continue all exercises in week two  
PREs emphasis quads, medial hamstrings, hip abduction  
Initiate Isokinetics, sub-maximal -4 maximal fast contractile velocities  
Begin running program if full painless extension and flexion are present

### **III. MINIMAL PROTECTION PHASE**

#### **Criteria for Progression:**

1. No instability
2. No swelling/tenderness
3. Full painless ROM

**Goals:** Increase strength and power

#### **Phase III Continued:**

##### **A. 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 Exercise Drills  
Fast Speed Isokinetics  
Eccentric Quads  
Isotonic Hip ADD, Medial Hamstrings  
Isokinetic Test  
Proprioception Training  
Endurance Exercise  
Stationary Bike 30-40 minutes  
Nordic Trac, Swimming, etc.  
Initiate Agility Program, Sport Specific Activities

### **IV. MAINTENANCE PROGRAM**

#### **Criteria for return to competition:**

1. Full ROM
2. No instability
3. Muscle strength 85% contralateral side
4. Proprioception ability satisfactory
5. No tenderness over MCL
6. No effusion
7. Quad strength; Torque /BW that fulfills criteria

#### **Maintenance Program**

Continue Isotonic Strengthening Exercises  
Continue Flexibility Exercises  
Continue Proprioceptive Activities