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MCL NON-OPERATIVE PHYSICAL THERAPY PRESCRIPTION

Diagnosis: MCL SPRAIN

The knee should be protected with a short-hinged brace for approximately 8 weeks, depending upon the severity of the injury. The following is Dr. Pathik Shah non-operative protocol based on phase specific guidelines. This protocol is intended to provide a general guideline to treating an MCL sprain. Progress should be modified on an individual basis.

PHASE I (0 to 4 WEEKS) INFLAMMATORY PHASE

GOALS:

Decrease swelling

Restore knee range of motion – Maintain full knee extension/100° knee flexion

Restore normal gait pattern

Restore full weight-bearing status

Aim to obtain 4/5 quadriceps and hamstring strength

TREATMENT:

Cryotherapy

Modalities to control inflammation

High intensity electrical muscle stimulation

ROM exercises

Seated flexion/extension off of table

Wall slides

Heel slides

Strengthening

Quadriceps setting

Multiplane straight leg raise

Stationary bike

Pool program if available

Stretching as needed to maintain ROM

Gait training: Protected weightbearing as indicated _____

PHASE II (4 to 6 WEEKS) SUBACUTE PHASE

GOALS:

Continue appropriate Phase I activities

Restore full ROM (flexion/extension)

Advance strengthening program

Advance to Full weightbearing

TREATMENT:

Cryo Proprioception exercises

Closed kinetic chain squat program

Closed kinetic chain unilateral squats, dips, and step-up progression

Closed kinetic chain multi-plane hip strengthening

Advance intensity and duration of stationary biking program. May add treadmill walking as swelling permits, avoid running and impact activity.

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PHASE III (6 to 10 WEEKS) ADVANCED STRENGTHENING

GOALS:

Full squat
Return to light jogging and agility drills
Restricted sport-specific drills

TREATMENT:

___ Advance closed-chain strengthening
___ Treadmill jogging
___ Dynamic proprioceptive exercises and perturbation training
___ Slide board
___ Rebounder training

PHASE IV (10 to 12 WEEKS) ADVANCED STRENGTHENING

GOALS:

95% Quadriceps index
90% Single leg hop index
Return to full running and sport specific drills
Definitive return to sport/competition

TREATMENT:

___ Plyometric training
___ Full agility/sport specific drills
___ Continue dynamic proprioceptive exercises
___ Road running

INSTRUCTIONS FOR SINGLE LEG EXERCISES

Step Up-Down Exercise

Place one foot on the step. Maintain balance, if necessary, by holding onto the wall or chair. Standing **sideways** to the step, slowly step up onto the step and slowly straighten the knee using the quadriceps muscles. Slowly lower the opposite foot to touch the floor. Do not land on the floor, just touch gently and repeat the step up.

Start with a step of 2 or 3 inches in height. Start with 3 sets of 5 repetitions. Add one repetition per set, per workout, until you can do 3 sets of 10. If pain free, progress the height of step. Repeat progression at new step height, starting with 3 sets of 5 repetitions.

To avoid overstressing the kneecap, limit exercise to step height no greater than the height of a normal stair (8-9inches). At this point, you can begin to add the single leg wall slide exercise. The strength workouts should be practiced 3 times a week (every other day).

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Single Leg Wall Slide Exercise

Stand on the single leg with your back and buttocks touching a wall. Place the foot about 6 inches from the wall. Slowly lower your body by bending the knee and slide down the wall until the knee is flexed about 45 degrees (illustration). Pause five seconds and then slowly slide back up to the upright starting position. Keep the hips level and be sure you are using your knee muscles to perform the exercise.

Start with 3 sets of 5 repetitions. Add one repetition per set, per workout, until you can do 3 sets of 10. At this point, you can begin to add the single leg squat exercise.

The strength workouts should continue every other day at the most, with more time between workouts if the knee gets sore after a session. Continue doing the step-up exercise each workout. Alternate the workouts between the single leg wall slide and the single leg squat

Single Leg Squat Exercise

Stand on one leg and lower your buttocks toward the chair. Slowly return to the standing and starting position. Remember to keep your head over your feet and bend at the waist as you descend. You do not have to squat all the way to the chair, instead, try to stay in a comfortable range of motion where there is no knee pain. As you gain strength, try to do the exercise without holding on to anything.

Start with 3 sets of 5 repetitions. Add one repetition per set, per workout until you can do 3 sets of 10.

After working up to the point where you can do 3 sets of ten of all three drills, you can hold dumbbells to add resistance. Start with 3 pounds in each hand and add 1 to 2 pounds a week until you reach 10 pounds in each hand. When you return to sports or recreational activities, decrease the strength workouts to 2 times a week and do 1 set of 10 of each of the three drills only, as a maintenance workout.