

Dr. Mark Adickes

Medial Collateral Ligament (MCL)

Introduction:

- This rehabilitation protocol is designed for patients with MCL injuries who require an early return to high level activity following injury. **Rehabilitation Protocol**

Goals of rehabilitation are to:

- Control joint pain, swelling
- Regain normal knee range of motion
- Regain a normal gait pattern
- Regain normal lower extremity strength
- Regain normal proprioception, balance, and coordination

The physical therapy is to begin as soon as possible after the injury. It is extremely important for the supervised rehabilitation to be supplemented by a home fitness program.

Return to activity:

- It requires both time and regular clinic evaluation to safely and efficiently return to functional activity.
- Adequate strength, flexibility, and endurance are all necessary to return to high level function, all of which are addressed in this program.
- Isokinetic testing and functional evaluation are required to assess a patient's readiness to return to sport.

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Phase 1: Week 1-2

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Range of Motion:

- Passive ROM, No limits
- Aggressive Patella mobility
- Ankle pumps
- Gastroc-soleus stretches
- Wall slides
- Heel slides

Strength:

- Quad sets x 10 minutes
- SLR (flex, abd, add)
- Multi-hip machine (flex, abd, add)
- Mini squats (0-45 °)
- Multi-angle isometrics (90-60 °) (No tension on MCL)
- When working adductors stress point should be superior to knee
- Calf Raises

Balance Training:

- Weight shifts (side/side, fwd/bkwd)
- Single leg balance
- Plyotoss

Weight Bearing:

- Wt bearing as tolerated
- Crutches until quad control is gained, then discontinued

Bicycle:

- May begin when 110 ° flex is reached

Modalities:

- E-stim/biofeedback as needed
- Ice 15-20 minutes with knee at 0 ° ext

Brace:

- Wear brace at all times with the following exceptions:
 - Remove brace to perform ROM and PT activities
- Immobilizer is D/C'd at 2 weeks pending physician exam

Goals for Phase 1:

- ROM 0-110 °
- Adequate quad contraction
- Control pain, inflammation, and effusion

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Phase 2: Week 3

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Range of Motion:

- Passive ROM, No limits
- Aggressive Patella mobility

Strength:

- Continue remedial strengthening as needed
- Leg press
- Step up, step down
- Stairmaster
- Leg curl
- Multi-hip machine (flex, abd, add)
- When working adductors stress point should be superior to knee
- Calf Raises

Weight Bearing:

- Full weight bearing

Bicycle:

- Increase tension

Balance Training:

- Balance board/2 legged
- Cup walking/hesitation walk
- Single leg balance
- Plyotoss

Modalities:

- E-stim/biofeedback as needed
- Ice 15-20 minutes with knee at 0 ° ext

Brace:

- Wear brace at all times with the following exceptions:
 - Remove brace to perform ROM and PT activities
- Immobilizer is D/C'd at 2 weeks pending physician exam

Goals for Phase 2:

- ROM 0-125 °
- Increase muscle strength and endurance
- Restore proprioception

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Phase 3: Week 4

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Range of Motion:

- Passive ROM, No limits
- Aggressive Patella mobility

Strength:

- Progressive resistance exercises
- Smith press
- Leg press
- Step up, step down
- Stairmaster
- Leg curl
- Multi-hip machine (flex, abd, add)
- When working adductors stress point should be superior to knee
- Calf Raises

Weight Bearing:

- Begin jogging
- Progress functional agility exercises as tolerated

Bicycle:

- Increase tension

Balance Training:

- Balance board/2 legged
- Cup walking/hesitation walk
- Single leg balance
- Plyotoss

Modalities:

- E-stim/biofeedback as needed
- Ice 15-20 minutes with knee at 0 ° ext

Brace:

- None

Goals for Phase 3:

- ROM Full
- Increase muscle strength and endurance
- Jogging
- Functional Agility Exercises

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Phase 4: Week 5-6

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Range of Motion:

- Passive ROM, No limits
- Aggressive Patella mobility

Strength:

- Progressive resistance exercises
- Smith press
- Leg press
- Step up, step down
- Stairmaster
- Leg curl
- Multi-hip machine (flex, abd, add)

Weight Bearing:

- Functional agility exercises as tolerated
- Progress to sprinting
- Progress to sports specific agility drills

Bicycle:

- As needed

Balance Training:

- Steam boats in 4 planes
- Single leg stance with plyotoss
- Wobble board balance work-single leg
- 1/2 Foam roller work

Modalities:

- E-stim/biofeedback as needed
- Ice 15-20 minutes with knee at 0 ° ext

Goals for Phase 4:

- ROM Full
- Increase muscle strength and endurance
- Sprinting
- Sport Specific Agility Exercises

Return to sport is allowed when the patient can perform sprinting and sports specific agility drills in an unrestricted manner. This usually occurs at the 5-6 week post-injury date. A physician's exam should be performed prior to a full release to all activities without restriction.