

Sports Rehabilitation & Performance Center Medial Collateral Ligament Sprain Rehabilitation Guideline (Grade III Sprains)

Phase I (Weeks 0-3)

Goals:

- Emphasis on knee protection from valgus forces
- Control pain / swelling
- Range of Motion $0 \rightarrow 120^{\circ}$
- Prevent Quadriceps inhibition
- Independence in home therapeutic exercise program

Treatment Strategies:

- Towel extensions, prone hangs, etc.
- Quadriceps re-education (Quad Sets with EMS or EMG)
- Progressive Weight Bearing $PWB \rightarrow WBAT$ with brace locked at 0° with crutches
- Patella mobilization
- Active flexion / Active-Assisted extension Exercise
- SLR's (avoid Adduction)
- Short Crank ergometry
- Hip progressive resisted exercises
- Proprioception Board (bilateral weight bearing / sagital plane only)
- Leg Press (bilateral / $70 \rightarrow 5^{\circ}$ arc) (if ROM > 90°)
- Knee Extension Isometrics (Sub-maximal Bilaterally @ 60[°])
- Upper extremity cardiovascular exercises as tolerated
- Cryotherapy
- Home therapeutic exercise program: Evaluation based
- Emphasize patient compliance to home therapeutic exercise program and weight bearing precautions / progression



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Phase 2 (week 3-6)

Goals:

- ROM 0 → 140°
- Good patella mobility
- Minimal swelling
- Restore normal gait (non-antalgic)
- Ascend 8"stairs with good control without pain

Precautions:

- Avoid descending stairs reciprocally until adequate quadriceps control & lower extremity alignment
- Avoid pain with therapeutic exercise & functional activities

Treatment Strategies:

- Progressive Weight Bearing/WBAT with crutches brace opened 0 → 50°, if good quadriceps control (good quad set / ability to SLR without lag or pain)
- D/C crutches when gait is non-antalgic
 Standard argometry (if knop BOM > 115%)
- Standard ergometry (if knee ROM > 115°)
- Leg Press ($85 \rightarrow 0^{\circ} arc$)
- AAROM exercises
- Mini Squats / Weight Shifts
- Proprioception training: Prop board / Contralateral Theraband Exercises
 Sagital & Frontal Planes
- Initiate Forward Step Up program, advance to Stairmaster
- Aquaciser (gait training)
- SLR's (progressive resistance)
 - Adduction (if pain free)
- Hamstring / Calf / Quadriceps flexibility exercises
- Hip / Hamstring PRE
- Active knee extension to 0° (PRE pain free ROM)
- Home therapeutic exercise program: Evaluation based



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Phase 3 (week 6-12)

Goals:

- Restore Full ROM
- Demonstrate ability to descend 8"stairs with good leg control without pain
- Improve ADL endurance
- Functional & Isokinetic Testing > 85% Limb Symmetry
- Improve lower extremity flexibility
- Protect patello-femoral joint

Precautions:

- Avoid pain with therapeutic exercise & functional activities
- Avoid running and sport activity till adequate strength development and MD clearance

Treatment Strategies:

- Progress Squat program (PRE)
- Brace changed to MD preference (OTS brace, Patella sleeve, etc.)
- Initiate Step Down program
- Lunges
- Isokinetic training (fast → moderate velocities)
- Advanced proprioception training (perturbations)
- Agility exercises (sport cord)
- Retrograde treadmill ambulation / running
- Forward Step Down Test (NeuroCom)
- Forward running
- Plyometric Exercises
- Sport Specific Training
- Functional & IsokineticTesting
- Home therapeutic exercise program: Evaluation based

Criteria for Advancement / Return to Sport

- ROM to WNL
- Ability to descend 8"stairs with good leg control without pain
- Hop Tests & Isokinetic Test > 85% limb symmetry
- Lack of apprehension with sport specific movements
- Flexibility to accepted levels of sport performance