

Rehabilitation Protocol: MCL Sprain – Non-Operative

Grade: ☐ 1 ☐ 2 ☐ 3

Grade 1: minimal fibers torn, no laxity – return to contact sport typically 1–2 weeks.

Grade 2: partial tear with slight to moderate laxity, requires protection – typically 2–4 weeks of rehab; return in a brace if the sport allows.

Grades 1–2 WB and Bracing: WBAT with crutches as needed until gait is normal; hinged knee brace as needed for comfort.

Grade 3: complete tear with no valgus end point – return to competition averages 5–7 weeks once full motion and strength return and a sport functional test is passed. Avoid valgus stress throughout. Please contact our office with any questions or concerns.

Grade 3 WB and Bracing: Hinged knee brace set at 0–90° weeks 0–2, then gradually opened fully as quadriceps control allows; brace for gait through week 6. Touchdown to partial WB with crutches weeks 0–2, then WBAT in brace weeks 3–4, wean crutches; full WB by week 6. Brace for sport through the season or discontinue 8–12 weeks after injury.

☐ **Phase I – Weeks 0–2 (up to 4 weeks for grade 3)**

- **Precautions:** Avoid activities that increase pain or effusion and any valgus stress; no end-range stretching with an empty end feel; WB and bracing as above by grade
- **Treatment**
 - Education: valgus stress, activity modification, pain/effusion management, HEP
 - Gait: wean assistive device as gait normalizes; non-reciprocal to reciprocal stairs; weight shifting within WB limits; aquatic/antigravity treadmill if available
 - Edema (POLICE, cryotherapy); patellar mobilizations; soft tissue mobilization
 - AAROM/AROM (brace may be removed or unlocked for ROM unless noted); stretching; stationary bike; foam rolling avoiding valgus stress
 - NMES; quad sets; SLR all planes (lock brace at 0° if quad lag); SLR adduction when pain-free for grade 1 only (hold for grades 2–3)
 - Terminal knee extension if pain-free; hip/ankle stabilizers; upper body and core
 - BFR
- **Criteria to Progress:** Minimal to no effusion; full extension and 110° flexion; SLR without lag; normalized gait

☐ **Phase II – Weeks 3–6 (up to 8 weeks for grade 3)**

- **Precautions:** Avoid valgus stress, stretching or overloading the ligament, hyperextension and premature return to activity
- **Treatment**
 - Education: hip versus knee strategy; edema management
 - Joint mobility (patella, tibiofemoral AP); achieve full, pain-free AROM
 - PREs for quadriceps, hamstrings, hip abductors/adductors (**grade 3: hold isolated adductor strengthening until weeks 4–6**)
 - Closed chain $\leq 90^\circ$: TKE, leg press double leg to eccentric to single leg; open chain quadriceps isometrics progressing to limited-arc isotonic
 - Squat to chair with hip strategy, depth to 90°; forward step ups 4 to 6 to 8 inch; step downs 4 to 6 inch
 - Double to single leg balance, static to dynamic, stable to unstable, eyes closed
 - Bike, elliptical; retrograde/antigravity treadmill

- **Criteria to Progress:** Full ROM; pain and effusion controlled; quadriceps strength $\geq 80\%$ of the other side; symmetric squat; single-leg balance without compensation; pain-free 8-inch step up and 6-inch step down

☐ **Phase III – Weeks 7–10 (up to 12 weeks for grade 3)**

- **Precautions:** Avoid overloading, compensatory patterns and premature return; brace per our office
- **Treatment**
 - Isotonic progression (double to single leg, body weight to external resistance); full kinetic chain and core; isokinetics if available
 - Dynamic proprioception and perturbation training; 8-inch step down; single-leg squat
 - Jumping: box jump, jump in place, forward, lateral, drop squat; hopping vertical to forward to lateral
 - Running program (antigravity treadmill or aquatic first if available); progress distance and speed
- **Criteria for Discharge or Phase IV:** 8-inch step down and single-leg squat with good form and control; running program completed without limitation (if applicable)

☐ **Phase IV – Return to Sport (if applicable)**

- **Precautions:** Avoid premature return and dynamic valgus; adequate rest and recovery
- **Treatment**
 - Shuttle runs, sprinting, sport distances; sport-specific plyometrics
 - Agility (ladder, hurdles, cutting); deceleration, twisting, pivoting and change of direction
 - Functional sport brace as indicated; sport drills, then practice, then contact, then competition
- **Return to Sport:** Strength $\geq 90\%$ of the other side; hop tests and star excursion $> 90\%$; no symptoms with sprinting, multidirectional movement and plyometrics; psychological readiness; clearance from our office