Medial Collateral Ligament (MCL) Injury

WHAT IT IS

The medial collateral ligament (MCL) is a large broad ligament located on the medial aspect (inside) of the knee. The ligament connects the femur (thigh bone) to the tibia (shin bone) and protects the knee from buckling inward. When any ligament is injured it is referred to as a sprain. The severity of a sprain is graded on a scale of 1-3. A Grade 1 (mild) sprain involves slight stretching of the ligament; a Grade 2 (moderate) sprain involves a partial tear; and a Grade 3 (severe) sprain is a complete tear of the ligament.

HOW IT HAPPENS

MCL injuries most often occur when a player sustains a blow to the outside of the knee while their foot is planted. This can occur in contact sports such as football, rugby, and soccer when other players hit the knee and/or leg from the outside. This creates what is called a valgus force which stresses the medial side of the joint and stretches the MCL. The MCL can also be injured if the knee buckles inward while making a forceful or high-speed change in direction.

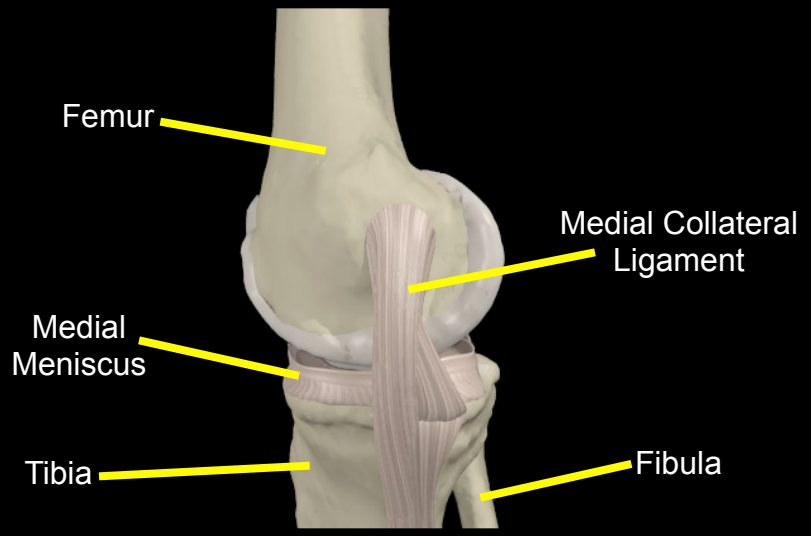
WHERE IT HURTS

Most of the pain will be localized on the medial side of the knee, along the path of the MCL. Pain is generally mild with soreness to the touch and some pain with lateral or twisting movements. Swelling may be present around the knee, specifically on the medial side. Some swelling may leak into the lower leg, calf region, or foot which may cause soreness in these areas.

IMMEDIATE TREATMENT

- **PROTECT** the knee from further injury.
- **REST** the knee from activities that cause pain or discomfort. Using crutches can allow you to rest the knee until you can walk without pain.
- **ICE** the knee for 15-20 minutes to decrease pain and swelling. Ice may be applied as often as once per hour.
- **COMPRESSION** wraps can be used to decrease swelling and provide minimal support.
- **ELEVATE** the knee above the level of the heart to decrease swelling.
- **IBUPROFEN** can help decrease both pain and swelling. Take NO MORE than 1200 mg per day following the label's recommended amounts.

RIGHT KNEE - MEDIAL VIEW (KNEECAP REMOVED)



REHABILITATION EXERCISES

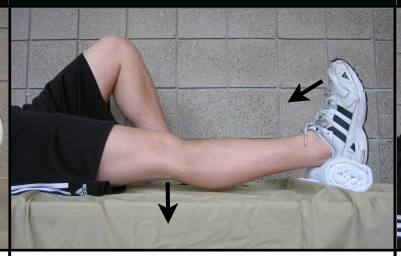
Seated Heel Slides

Place a towel under your heel and slide your heel towards your backside, causing your knee and hip to flex. Return heel to starting position. Repeat 30 times.

Heel Digs

Sit with legs bent to a 90-degree angle and your heels against the table. Without moving your legs, contract your hamstrings to “dig” your heels into the table. Hold contraction for 3 seconds. Repeat 10-30 times.

Quad Sets

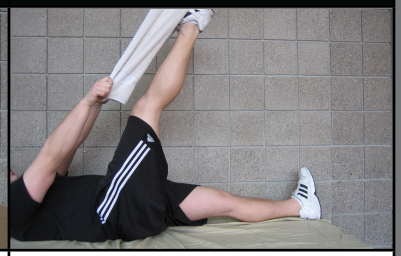


Contract the quadriceps muscle (on the front of the thigh) by pressing the back of your knee to the floor and pulling your toes towards you. Hold contraction for 3 seconds. Repeat 10-30 times.

Straight Leg Raise

Perform a quad set (see previous exercise) and then raise your heel 6-8 inches off the floor, keeping your knee straight. Hold for 3 seconds, gently lower the leg, and then relax the quadriceps. Repeat 10-30 times.

Hamstring Stretch



Loop a towel around your foot and use it to help pull your leg up in front of you while keeping your knee straight. Hold for 20-30 seconds. Repeat 3 times.

Stationary Bike

Ride a stationary bike to gently increase knee range-of-motion. Start with the seat high, so you can just reach the pedals, then gradually lower the seat as motion increases.

Straight Leg Hip Extension

Lie on your stomach and lift your foot off the floor 3-4 inches, keeping your knee straight. Hold for 3 seconds. Repeat 10-30 times.

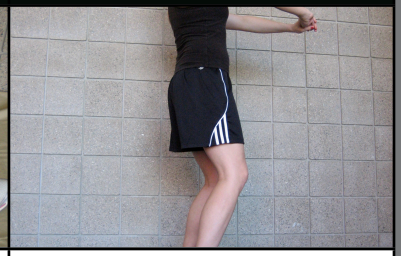
Side-Lying Hip Abduction

Lie on the side of the uninjured leg and lift your heel off the ground about 10-12 inches. Keep your knee as straight as possible and hold for 3 seconds. Repeat 10-30 times.

Ball Squeezes

Sit with legs bent to a 90-degree angle and your feet resting on the table. Place a ball between your knees. Squeeze the ball and hold for 3 seconds. Repeat 10-30 times.

Mini Squats



Stand with feet shoulder-width apart and back straight. Bend knees and lower hips 6-12 inches, making sure to keep your knees behind your toes. Hold for 3 seconds. Return to starting position. Repeat 10-30 times.

ADVANCED CARE

Consult a physician if you suspect a Grade 3 MCL sprain, as other structures in the knee are likely to be damaged as well. For Grade 1 & 2 sprains, return to activity usually occurs within 4-8 weeks after the injury, once there is minimal to no swelling, pain-free full range of motion, and full muscular control. Strengthening, flexibility, and balance activities should be continued to prevent future injuries.

Injury Prevention & Care - A Campus Recreation Program
http://crec.unl.edu/ipcare

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