

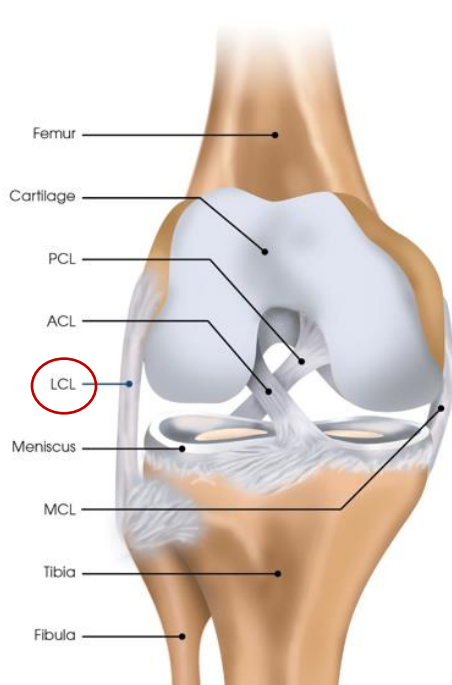
# STEVEN CHUDIK MD

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## SHOULDER, KNEE & SPORTS MEDICINE

### Lateral Collateral Knee Ligament Sprain

Lateral collateral knee ligament sprain is a sprain (tear) of one of the four major ligaments of the knee. The lateral collateral ligament (LCL) is a structure that helps keep the normal relationship of the femur (thigh bone) and the tibia (leg bone) on the outer side of the knee. It prevents the knee from buckling outward.



MRI image showing an injured LCL. Note the bright fluid indicates swelling and injury.

LCL sprains usually occur in association with other knee ligament injuries. When torn, this ligament may heal, but in a lengthened position (slightly loose). Sprains are classified into three grades. In a *first-degree* sprain, the ligament is not lengthened but is painful. With a *second-degree* sprain, the ligament is stretched but still functions. With a *third-degree* sprain, the ligament is torn completely and does not function.

#### Frequent Signs and Symptoms

- Pain and tenderness on the outer side of the knee
- A pop, tearing, or pulling sensation at the time of injury
- Bruising (after 24 hours) at the site of injury
- Knee stiffness
- Limping, often walking with the knee bent



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### Etiology (Causes)

LCL sprains occur when a force exceeds the strength of the ligament. Commonly, this injury is the result of a direct blow to the inner side of the knee, usually while the foot is on the ground and the knee is straight. A force to the inner knee is rarely the cause, because the other knee usually protects the injured knee (thus getting hit on the outer side of the other knee).

### Risk Factors

- Contact sports (football, rugby) and sports that require pivoting or cutting (changing direction), such as soccer, baseball
- Poor physical conditioning (strength and flexibility)
- Improper equipment use

### Prevention

- Appropriately warm up and stretch before practice and competition.
- Maintain appropriate conditioning:
  - Thigh, leg, and knee flexibility
  - Muscle strength and endurance
  - Cardiovascular fitness
- Wear proper protective equipment (such as the correct length of cleats for surface).
- Functional braces may be effective in preventing injury.

### Outcomes

Injury to the LCL alone may heal on its own with appropriate treatment. Occasionally, isolated LCL injuries require surgery. The LCL is a component of a group of ligaments called the posterolateral corner. Injuries to the posterolateral corner as opposed to isolated LCL injuries result in the instability and require surgical repair and reconstruction.

### Potential Complications

- Frequent recurrence of symptoms, such as knee giving way, instability, and swelling
- Injury to meniscal cartilage, resulting in locking and swelling of the knee
- Injury to articular cartilage, resulting in knee arthritis
- Injury to other ligaments of the knee (commonly)
- Injury to nerves, causing numbness of the outer leg, foot, and ankle and weakness or paralysis, with inability to raise the ankle, big toe, or lesser toes
- Knee stiffness



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### Treatment Considerations For An Isolated LCL Injury

Initial treatment consists of medications and ice to relieve pain and reduce the swelling of the knee. Walking with crutches until you walk without a limp is often recommended (you may put full weight on the injured leg). Your physician may recommend a knee brace with a hinge to help regain knee motion while protecting the LCL. Range-of-motion, stretching, and strengthening exercises may be carried out at home, although referral to a physical therapist or athletic trainer is usually recommended. Rehabilitation of LCL sprains usually concentrates on reducing knee swelling, regaining knee range of motion, regaining muscle control and strength, and a short period of bracing. For severe LCL sprains, those associated with other knee ligament injuries, or when bone is pulled off with the ligament from its attachment, surgery may be recommended.

### Possible Medications

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Your physician may prescribe stronger pain relievers as necessary. Use only as directed and only as much as you need.

### Modalities (Heat and Cold)

- Cold is used to relieve pain and reduce inflammation. Cold should be applied for 10 to 15 minutes every two to three hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage with a cloth between the ice and your skin to prevent burning /freezing your skin.
- Heat may be used before performing stretching and strengthening activities prescribed by your physician, physical therapist, or athletic trainer. Use a heat pack or a warm soak.

### Notify My Office If Symptoms Worsen

