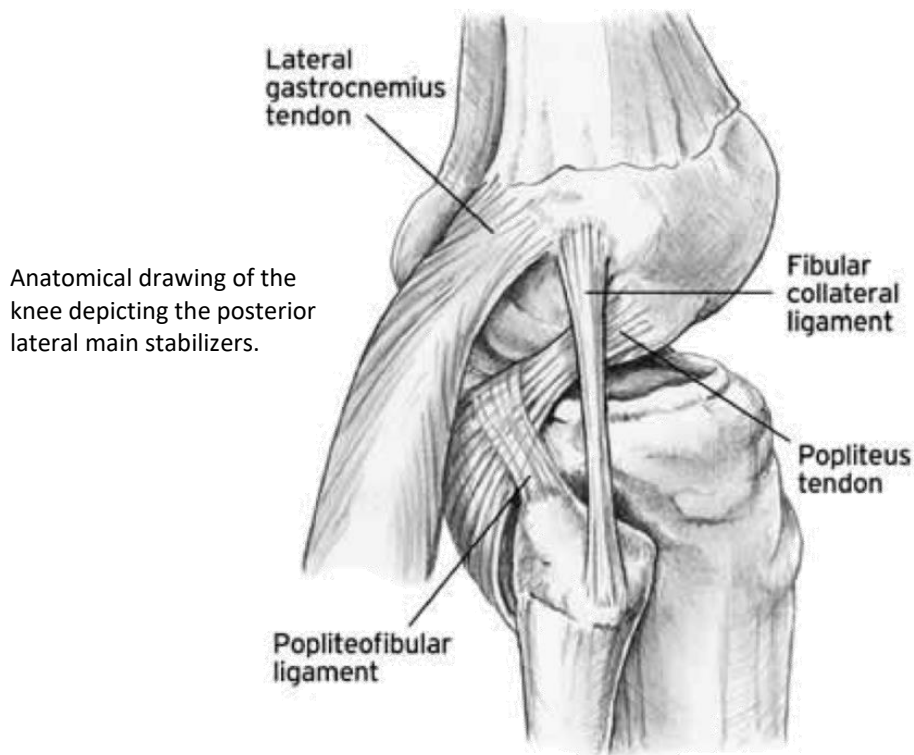


## Posterolateral Corner Injury

The posterolateral corner (PLC) of the knee consists of many stabilizers that protect the knee against direct varus and rotational forces. The three main stabilizers of the PLC include the lateral (fibular) collateral ligament (LCL), the popliteofibular ligament (PFL), and the popliteus tendon. A few secondary stabilizers that assist are the lateral capsule, hamstrings, and IT Band. A common mechanism of injury to the PLC occurs with a direct blow to the anteromedial knee or forced hyperextension. PLC tears are found commonly with anterior cruciate ligament (ACL) and posterior cruciate ligament (PCL) tears, so this is an important pathology to test following all ligamentous injuries.



### Frequent Signs and Symptoms

- A pop heard or felt at the time of injury, an inability to continue activity after the injury, and significant knee swelling noticed within 6 to 8 hours after the injury
- Inability to straighten knee
- Walking with a limp and knee giving way or buckling, particularly the first several months after injury



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- Occasionally, locking when there is concurrent injury to the meniscus cartilage
- Pain that is worse with sitting for long periods, when rising from a sitting position, when going up or down stairs or hills, when kneeling or squatting, and when wearing shoes with heels; often, pain with jumping
- Usually, achy pain, but may be sharp
- Difficulty running backward or backpedaling
- Drop foot on the affected limb if the peroneal nerve is damaged

### **Etiology (Causes)**

Posterolateral corner injuries are caused by a force that exceeds the strength of the static stabilizers. This injury may be a result of a direct blow but can also occur with forced hyperextension and non-contact injuries. PLC injuries are often found in conjunction with ACL and PCL tears.

### **Risk Factors**

- Contact sports that may result in forced hyperextension of the knee (football, volleyball, basketball, soccer, rugby)
- Poor physical conditioning (strength and flexibility)

### **Prevention**

- Maintain appropriate conditioning:
  - Thigh, knee, and leg flexibility
  - Muscle strength and endurance
  - Cardiovascular fitness
- Use proper technique.

### **Outcomes**

If untreated, a PLC injury will usually result in the knee giving way and recurrent injuries to the knee with sports and often with daily activities. Injuries to the arteries or nerves have a higher risk of poor outcome. Often surgery is required to restore knee stability. Some athletes never return to sports participation after this injury, although the prognosis is much better when there is no injury to the artery and nerves.



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### Potential Complications

- Frequent recurrence of symptoms, such as diffuse achy knee pain that is worse with sitting, when rising from sitting, when going up or down stairs or hills, when kneeling or squatting, and when wearing shoes with heels, and with jumping
- Giving way, instability, and swelling
- Injury to meniscal cartilage, resulting in locking and swelling of the knee
- Arthritis of the knee
- Knee stiffness (loss of knee motion)

### Treatment Considerations

Immediate evaluation of knee stability and nerve and vascular function must be performed. Initial treatment consists of medications and ice to relieve pain and reduce the swelling of the knee. Walking with crutches is often recommended. Bracing or casting may also be recommended initially. Rehabilitation of these injuries usually concentrates on reducing knee swelling, regaining knee range of motion, regaining muscle control and strength, functional training, bracing, and education, such as avoiding sports that require pivoting, cutting, changing direction, and jumping and landing. An MRI is likely required prior to surgery to evaluate the extent of damage. Properly timed surgical repair or reconstruction (replacement) of one or more structures, in the hands of an experienced orthopedic surgeon, has the best chance for an optimal result. Some athletes never return to sports, although often this depends on the associated injuries and the demands of the sport.

### Possible Medications

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within seven 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.



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**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**



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