Anatomy: A ligament is a band of fibrous connective tissue connecting bones together and providing support. The lateral collateral ligament, or LCL, is also referred to as the fibular collateral ligament (refer to diagram). This ligament is located on the lateral or outside of the knee. This ligament provides support to the outside of the knee as it attaches from the femoral epicondyle to the head of the fibula. This ligament lies in the posterior 1/3 of the knee joint and is injured through a mechanism of a direct blow to the medial (middle) aspect of the knee in which a varus force opens the lateral (outside) joint line, thus stressing the integrity of the lateral collateral ligament. This ligament can also be injured through a mechanism of falling away over a fixed foot, creating a varus force.

This superficial ligament is not as commonly injured as the medial collateral ligament. The lateral collateral ligament is not attached to the lateral meniscus or the lateral capsule of the knee joint and is therefore usually not associated with other structural damage. This ligament is commonly injured in recreational activities or sports such as football and skiing.

Signs and Symptoms of a lateral collateral ligament injury include lateral knee pain along the course of the ligament, mild to moderate delayed swelling, and variable instability. Because the lateral collateral ligament attaches to two different bones, it is important to have an X-ray taken in order to rule out any possible damage to the bony structures.
Ligamentous injuries are classified or graded by the amount of fibers that are torn and the amount of instability present. The grades of ligamentous injury are as follows:

Grade I. 1. Less than 5% fibers torn  
2. No loss of stability.  
3. Mild to moderate pain.

Grade II. 1. 5% to 99% fibers torn.  
2. Mild to moderate instability.  
3. Moderate to severe pain.

Grade III. 1. Complete tear or rupture of ligament.  
2. Severe instability.  
3. Mild to moderate initial pain followed by little or no pain.

Treatment/Management: During the acute phase of an injury to the LCL, treatment should consist of ice, elevation of the knee, compression wrap, and anti-inflammatories. The treatment program for this injury will include the following:

1. Weight bearing as tolerated with walking.  
2. Quad sets.  
3. Straight leg raises.  
4. Heel slides.  
5. Hamstring curls standing.  
6. Hamstring stretches.  
7. Gastrocnemius stretches.

Once the swelling and pain have decreased, more progressive exercises can begin. These include:

1. Bicycling  
2. Swimming  
3. Walking  
4. PNF patterns with hip, knee and ankle  
5. Balance exercises  
6. Progressive resistive exercises with weights  
7. Nordic Track  
8. Stairmaster

The patient may return to recreational activities or sports once full range of motion is achieved, proper muscle control is regained, good balance is demonstrated, and swelling and pain is absent in the lateral aspect of the knee. The use of a supportive knee brace may be required for full, safe return to activities.