

POSTERIOR CRUCIATE LIGAMENT TEAR

DESCRIPTION

This is a sprain (tear) of one of the 4 major ligaments of the knee. The posterior cruciate ligament (PCL) is a rope like structure that helps keep the normal relationship of the femur (thigh bone) and the tibia (leg bone) such that the leg bone does not slip back on the femur. This ligament is the largest and strongest within the knee. When torn, this ligament may heal in a lengthened (stretched out) position, or it may scar to other structures of the knee.

FREQUENT SIGNS AND SYMPTOMS

- A pop is usually heard or felt at the time of injury, an inability to continue activity after the injury, and large knee swelling noticed within 6 - 8 hours after the injury.
- Inability to straighten knee.
- Walking with a limp, knee giving way or buckling, particularly the first several months after injury.
- Occasionally locking may exist when there is concurrent injury to the meniscus cartilage.
- Diffuse knee pain, usually in the front half of the knee, behind the kneecap, or in the very back of the knee. Pain may also be above or below the kneecap. Pain is worse with sitting for long periods of time, arising from a sitting position, going up or down stairs or hills, kneeling, squatting, wearing shoes with heels. Often there is pain with jumping.
- Pain is usually achy, though may be sharp.
- Difficulty running backwards or back pedaling

CAUSES

Force that exceeds the strength of the ligament. This injury may be as a result of a non-contact injury (excessively straightening the knee) or from contact such as getting tackled at the knee (especially forced bending of the knee) or landing on the knee.

EXPECTED OUTCOME

Not completely known at this time. Usually it takes 3 - 8 months of conservative treatment and appropriate rehabilitation program before functional adaptation occurs and ability to return to sports. However arthritis may develop 20 years after injury. It is not known if surgery alters this outcome.

POSSIBLE COMPLICATIONS

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

GENERAL TREATMENT CONSIDERATIONS

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). Range of motion, stretching and strengthening exercises may be carried out at home, though usually referral to a physical therapist or athletic trainer is recommended. Occasionally, your physician may recommend a knee brace, especially if other ligaments are injured along with the PCL.

The PCL has a complex structure and as yet, cannot be replicated with surgery. Thus, for most isolated PCL injuries, surgery is not recommended. Rehabilitation is the treatment of choice. Rehabilitation of PCL tears usually concentrates on reducing knee swelling, regaining knee range of motion, regaining quadriceps muscle control and strength, functional training, bracing (rarely) and education.

For severe PCL injuries, particularly associated with other injuries to the knee, surgical reconstruction (replacement with a graft) may be recommended. Surgery may also be recommended for patients with chronic PCL tears that continue to have symptoms 6 - 12 months after injury. Surgical reconstruction rarely restores complete knee ligament tightness. If the ligament pulls a piece of bone off with it and it is away from where it belongs and is large enough, surgery to replace the bone where it belongs and holding it with a screw, stitches or pins is often performed.

MEDICATION

- Non-steroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take if surgery planned in 7 days or less), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact him/her immediately if any bleeding, stomach upset or an allergic reaction occurs.
- Stronger pain relievers may be prescribed as necessary by your physician. Use only as directed and only as much as you need.

HEAT AND COLD:

- Cold is used to relieve pain and reduce inflammation for acute and chronic cases. Cold should be applied for 10 - 15 minutes every 2-3 hours for inflammation and pain, and immediately after any activity which aggravates your symptoms. Use ice packs or an ice massage.
- Heat may be used prior to performing stretching and strengthening activities prescribed by your physician, physical therapist or athletic trainer. Use heat pack or a warm soak.

NOTIFY OUR OFFICE IF

- Symptoms get worse or do not improve in 6 weeks despite treatment
- New, unexplained symptoms develop. Drugs used in treatment may produce side-effects.