

ULNAR COLLATERAL LIGAMENT (UCL) INJURY OF THE ELBOW

DESCRIPTION

This is a sprain (tear) of one of the ligaments on the inner side of the elbow. The ulnar collateral ligament (UCL) is a structure that helps keep the normal relationship of the humerus (arm bone) and the ulna (one of the forearm bones). This ligament is injured in throwing type of sports or after elbow dislocation or surgery. It may occur as a sudden tear or gradually stretch out over time with repetitive injury. This ligament is rarely stressed in daily activities. It prevents the elbow from gapping apart on the inner side. When torn, this ligament usually does not heal or it may heal in a lengthened position (loose). Sprains are classified into 3 grades: 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 and does not function.

FREQUENT SIGNS AND SYMPTOMS

- Pain and tenderness on the inner side of the elbow, especially when trying to throw
- A pop, tearing or pulling sensation may be noted at the time of injury
- Swelling and bruising (after 24 hours) at the site of injury at the inner elbow and upper forearm if an acute tear
- Inability to throw at full speed, loss of ball control
- Elbow stiffness, inability to straighten the elbow
- Numbness and/or tingling in the ring and little fingers and hand
- Clumsiness and weakness of hand grip

CAUSES

Force that exceeds the strength to the ligament. This injury usually is the result of throwing repetitively or particularly hard. It may occur with an elbow dislocation. It may occur as a result of surgery.

RISK INCREASES WITH

- Contact sports (football, rugby) and sports where falling on an outstretched hand resulting in an elbow dislocation
- Throwing sports, such as baseball and javelin
- Overhead sports such as volleyball and tennis
- Poor physical conditioning (strength/flexibility)
- Improper throwing mechanics

PREVENTIVE MEASURES

- Appropriate warm-up and stretching before practice and competition
- Appropriate conditioning including arm, forearm and wrist flexibility, muscle strength and endurance
- Proper protective technique of falling
- Proper technique of throwing
- Functional braces may be effective in preventing injury, especially reinjury for contact sports

EXPECTED OUTCOME

The UCL usually does not heal sufficiently on its own with non-operative treatment. However, to return to hard throwing, surgery is often necessary.

POSSIBLE COMPLICATIONS

- Frequent recurrence of symptoms, such as inability to throw at full speed or distance, pain with throwing, loss of ball control, especially if return to activity is too soon after injury
- Injury to other structures of the elbow, including the cartilage of the outer elbow, loose body formation, injury to the ulnar nerve to the hand, and medial epicondylitis and strain of the muscle-tendon of the muscles that bend the wrist.
- Injury to articular cartilage resulting in arthritis of the elbow.
- Elbow stiffness (loss of elbow motion)

GENERAL TREATMENT CONSIDERATIONS

Initial treatment consists of medications and ice to relieve pain and reduce the swelling of the elbow. Stop the sports that caused the injury. Occasionally a splint, brace or cast may be recommended while the acute phase subsides. Later, rehabilitation to improve strength endurance and proper throwing mechanics is initiated. This may be carried out at home, though usually referral to a physical therapist or athletic trainer is recommended. A gradual return to throwing is attempted. For those who have an acute rupture of the ligament or those who have failed therapy and wish to continue throwing competitively, surgical reconstruction (rebuilding the ligament using other tissue) is usually recommended. This is known as the Tommy John Procedure. Return to sports after injury without surgery may take 3 to 6 months, and may take 6 to 18 months following surgery.

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.

HEAT AND COLD:

- Cold is used to relieve pain and reduce inflammation. 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. Use a towel between the ice and your elbow to reduce the chance of injury to the ulnar nerve at the inner elbow.
- 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 4-6 weeks despite treatment
- You experience pain, numbness, or coldness in the hand
- Blue, gray or dusky color appears in the fingernails
- New, unexplained symptoms develop. Drugs used in treatment may produce side-effects.