

VALGUS EXTENSION OVERLOAD SYNDROME (VEOS)

DESCRIPTION

This is a constellation of problems and pains within the elbow due to overuse and repetitive throwing forces. The ulnar collateral ligament (UCL) on the inner side of the elbow is a structure that helps keep the normal relationship of the humerus (arm bone) and the ulna (one of the forearm bones). This ligament may be stretched over time with repeated hard throwing. The stretching of the ligament results in gapping apart of the inner side of the elbow. This stretches the ulnar nerve on the inner elbow, causing symptoms in the hand, particularly the ring and little fingers. The outer part of the elbow and the back of the elbow develop increased pressure from the loose UCL, resulting in cartilage injury, bone spurs and loose pieces of bone floating within the elbow joint.

FREQUENT SIGNS AND SYMPTOMS

- Pain and tenderness about the elbow (inner, outer or back of the elbow), especially when trying to throw or straightening the elbow
- Occasionally locking or catching of the elbow
- Swelling of the elbow
- 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
- Clumsiness and weakness of hand grip

CAUSES

Force that exceeds the strength of the ligament results in stretching of the ulnar collateral ligament of the elbow. This injury usually is the result of throwing repetitively or particularly hard. This causes stretching of the ulnar nerve and increased pressure of the cartilage on the outer portion of the elbow, as well as the back of the elbow. This causes bone spur formation, which may break off and become loose pieces of bone within the joint.

RISK INCREASES WITH

- Sports where the arm is used to throw or straighten hard (baseball, javelin, hockey slapshot, tennis serve, volleyball)
- 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 technique of throwing, serving, hitting the puck
- Braces may be effective in preventing injury, especially reinjury by reducing forceful straightening of the elbow

EXPECTED OUTCOME

Often treatable with non-operative management, though may require surgery to alleviate symptoms. Prone to recurrence after a prolonged period of time if the sport is continued.

POSSIBLE COMPLICATIONS

- Frequent recurrence of symptoms and repeated injury resulting in a chronic, repetitive problem, 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. Appropriately addressing the problem the first time decreases the frequency of recurrence and optimizes healing time.
- Prolonged healing time if activities are resumed too soon.
- Injury to other structures of the elbow, including medial epicondylitis and strain of the muscle-tendon of the muscles that bend the wrist.
- Arthritis of the elbow.
- Elbow stiffness (loss of elbow motion)
- Locking of the elbow
- Prolonged disability
- Inability to return to same level of sports
- Tear of the ulnar collateral ligament
- Risks of surgery, including infection, bleeding, injury to nerves, persistent pain, increased pain, catching and/or locking, tear, need for re-operation

GENERAL TREATMENT CONSIDERATIONS

Initial treatment consists of medication and ice to relieve the pain, and modifying the activity which initially caused the problem to occur. Occasionally a splint, brace or cast may be recommended. Elbow range of motion, strength, endurance and proper throwing mechanics are performed. 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. If symptoms persist or if there is locking and catching which are due to loose bone fragments within the joint, arthroscopic surgery is recommended. Surgery is performed to remove bone spurs, bone fragments and loose cartilage. Return to sports after surgery may take 3 months.

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.

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.