

# ***STERNOCLAVICULAR SEPARATION***

## **DESCRIPTION**

This is an uncommon sprain of the ligaments of the sternoclavicular joint (junction between the breastbone {sternum} and the collarbone {clavicle}). When a ligament is over-stretched, it becomes taut and gives way at its weakest point, either where it attaches to the bone or within its midsubstance. The sprain may range from where the collarbone keeps its normal position with respect to the sternum (non-displaced) to the collarbone losing contact with the sternum. The collarbone may move outwards (anteriorly) to become more prominent, causing a bump on the chest, or backwards, behind the sternum (posteriorly).

## **FREQUENT SIGNS AND SYMPTOMS**

- Severe pain, tenderness, swelling and bruising, and occasionally a bony bump, at the sternoclavicular joint.
- Pain at the sternoclavicular joint when attempting to bring the affected arm across and in front of the body
- Hoarseness of voice, difficulty swallowing, difficulty breathing, neck fullness, choking sensation (all are rare, but if any occur, these are emergency situations)

## **CAUSES**

Stress on a ligament by a force temporarily moving the sternoclavicular joint out of its normal position, such as with direct trauma to the collarbone near its joint with the sternum or a violent force from the side, compressing the shoulder toward the sternum. Less commonly it may be due to a fall on an outstretched hand.

## **RISK INCREASES WITH**

- Contact sports (football, soccer, boxing) and weight-lifting.
- Previous collarbone injury or sternal injury
- Poor physical conditioning (strength/flexibility)
- Inadequate protective equipment or fit

## **EXPECTED OUTCOME**

Usually symptoms curable with appropriate treatment. It is important to allow adequate healing time before resuming activity and with proper rehabilitation, permanent disability can be avoided without surgical intervention. Healing time varies with type of sport and position, arm injured (dominant versus non-dominant) and severity of sprain.

## **POSSIBLE COMPLICATIONS**

- Weakness and fatigue of the arm / shoulder (uncommon)
- Continued pain and inflammation of the SC joint
- Prolonged healing time if usual activities are resumed too early and susceptibility to recurrent injury
- Prolonged pain and/or disability (occasionally)
- Unstable or arthritic shoulder following repeated injury
- Death from posterior displacement of collarbone into airway or arteries, veins or nerves of the neck.

## **GENERAL TREATMENT CONSIDERATIONS**

Initial treatment consists of medication and ice to relieve pain, stretching to prevent shoulder stiffness, and modification of activities to allow the ligaments to heal. Non-surgical treatment is usually successful with full return to activity and no loss of strength for most sprains of the SC joint. A sling or figure-of-8 brace may be prescribed for comfort. Return to sports activity is based on type of sport and position, arm injured (dominant versus non-dominant) and severity of sprain. Surgery is usually reserved for those with posterior displaced sprains (where the collarbone goes backwards into the neck) and causes compression of the vital structures in the neck (airway, voicebox or blood vessels to the arms or head). This is usually an emergency. Rarely surgery is needed for those with chronic pain who have failed 4-6 months of conservative treatment.

## **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.
- Topical ointments may be of benefit.
- Pain relievers may be prescribed as necessary by your physician. Use only as directed.
- Injections of corticosteroids may be given to reduce inflammation, though not usually for acute injuries.

## **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.
- 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:**

- Pain, swelling, or bruising worsens despite treatment
- You experience pain, numbness, swelling or coldness in the arm.
- Blue, gray or dusky color appears in the fingernails.
- Hoarseness of your voice or difficulty swallowing
- The collarbone moves back out of normal position (if repositioned)
- Any of the following occur after surgery:
  - Increased pain, swelling, redness, drainage, or bleeding from the surgical area
  - Signs of infection (headache, muscle aches, dizziness, or general ill feeling with fever)
- New, unexplained symptoms develop. Drugs used in treatment may produce side effects.