

STERNOCLAVICULAR SEPARATION



■ ■ ■ Description

Sternoclavicular separation is an uncommon sprain of the ligaments of the sternoclavicular joint (the junction between the breastbone [sternum] and the collarbone [clavicle]). When a ligament is overstretched, 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 (nondisplaced) to the collarbone losing contact with the sternum. The collarbone may move outward (anteriorly) to become more prominent, causing a bump on the chest, or backward, behind the sternum (posteriorly).

■ ■ ■ Common 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
- Fall on an outstretched hand (less common)

■ ■ ■ Risk Increases With

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

■ ■ ■ Preventive Measures

- Appropriately warm up and stretch before practice or competition.
- Maintain appropriate conditioning:
 - Shoulder and arm flexibility
 - Muscle strength and endurance
- Wear proper protective equipment (chest and shoulder pads) and ensure correct fit.
- Use proper technique (including falling and landing) and have a coach correct improper technique.
- Taping, protective strapping, or an adhesive bandage may be recommended before practice or competition.

■ ■ ■ Expected Outcome

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

■ ■ ■ Possible Complications

- Weakness and fatigue of the arm and shoulder (uncommon)
- Continued pain and inflammation of the sternoclavicular (SC) joint
- Prolonged healing time and susceptibility to recurrent injury if usual activities are resumed too soon
- Prolonged pain 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. Nonsurgical 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-eight brace may be prescribed for comfort. Return to sports activity is based on type of sport and the position played, the arm injured (dominant versus nondominant), and the severity of the sprain. Surgery is usually reserved for those with posterior displaced sprains (when the collarbone goes backward into the neck) and causes compression of the vital structures in the neck (airway, voice box, or blood vessels to the arms or head). This is usually an emergency. Rarely, surgery is needed for those with chronic pain who have not recovered after 4 to 6 months of conservative treatment.

■ ■ ■ Medication

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- 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, although not usually for acute injuries.

■ ■ ■ Heat and Cold

- Cold is used to relieve pain and reduce inflammation. Cold should be applied for 10 to 15 minutes every 2 to 3 hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage.
- Heat may be used before performing stretching and strengthening activities prescribed by your physician, physical therapist, or athletic trainer. Use a 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
- You develop 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)

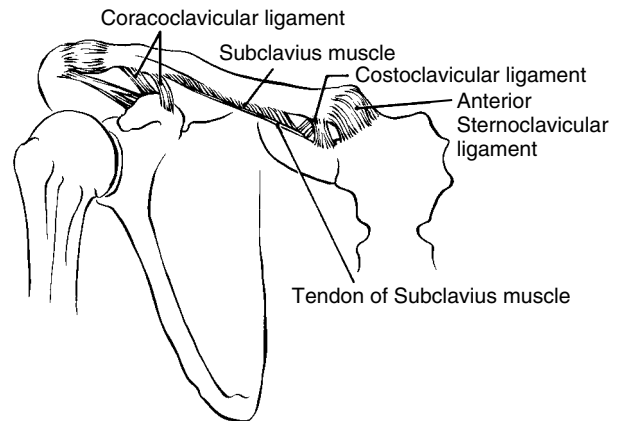


Figure 1

From Eaten RG: Joint Injuries of the Hand. Springfield, Charles C. Thomas.

Notes:

(Up to 4400 characters only)

Notes and suggestions