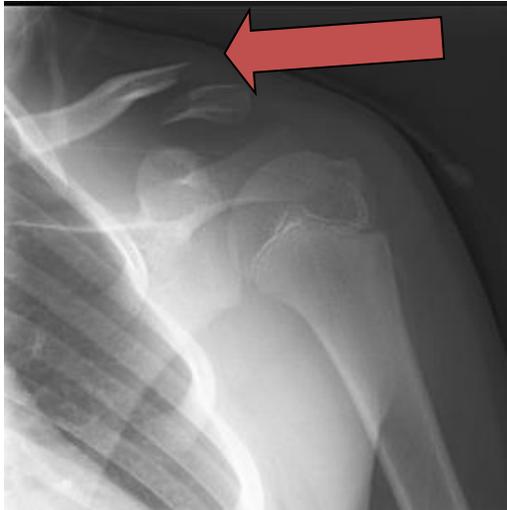


## Distal Clavicle Fracture

A distal clavicle fracture is a fracture (break) in the distal third of the clavicle (collarbone). This occurs after a specific injury and can be initially be mistaken for an acromioclavicular sprain (“separated shoulder”) on a physical examination.



X-ray of distal clavicle fracture



CT scan of distal clavicle fracture

### Frequent Signs and Symptoms

- Deformity or bump if the fracture is complete and the bone fragments separate enough to distort the normal appearance of the top of the shoulder
- Pain, tenderness, and swelling at the fracture site
- Bruising at the site of injury
- Loss of strength or pain when attempting to use the affected arm
- Numbness or coldness in the shoulder and arm on the affected side if the blood supply is impaired or nerves are injured (rare)
- Uncommonly, shortness of breath or difficulty breathing

### Etiology (Causes)

- Usually, impact or falling on the tip of the shoulder
- A direct blow to the clavicle
- Less commonly, an indirect stress, such as falling on an outstretched hand or on the tip of the elbow



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### Risk Factors

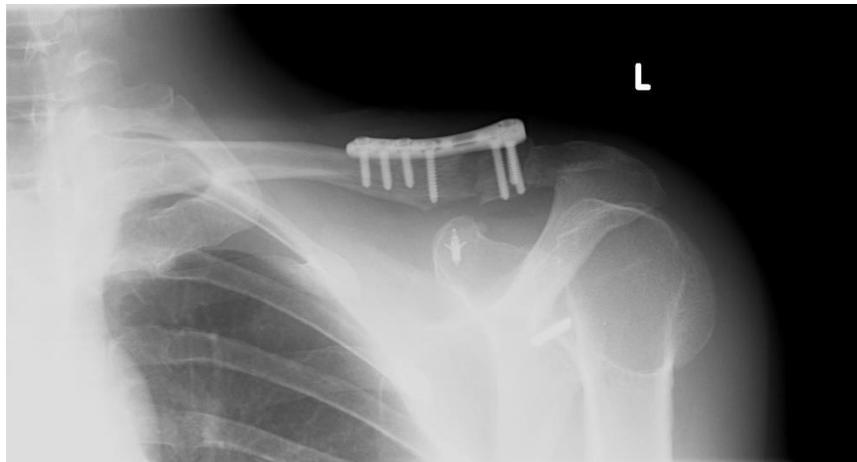
- Sports that require contact or collision, such as football, soccer, hockey, and rugby
- Sports with high risk of falling on shoulder, such as rodeo riding, mountain bike riding, or cycling
- Inadequate protective equipment
- History of bone or joint disease, especially osteoporosis

### Prevention

- Maintain appropriate conditioning, particularly neck, shoulder, and arm muscle strength, endurance, and flexibility
- Ensure proper protective equipment fit (such as shoulder pads)
- Use proper technique with activities, and have a coach or medical professional correct improper technique

### Outcomes

Most displaced distal clavicle fractures do not heal on their own without surgical intervention. They are associated with injury to the coracoclavicular ligaments, thus allowing significant displacement and non-healing of the fracture. Significantly displaced and open (when the bone breaks through the skin) fractures require surgery to prevent infection, restore the proper bony alignment of the clavicle, and promote healing. Patient lifestyle factors, such as smoking, can also prevent normal healing.



Post-operative X-ray



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### Potential Complications

- Pressure on or injury to nearby nerves, ligaments, tendons, muscles, blood vessels, or other tissues
- Weakness and fatigue of the arm or shoulder
- Delayed healing of the fracture can occur due to the naturally poor blood supply to the clavicle
- Nonunion (non-healing) of the fracture
- Prolonged healing time, nonunion or re-fracture if usual activities are resumed too early.
- Excessive bone and scar tissue formation at the fracture site, can cause compression of nerves and blood vessels under the clavicle, leading to pain, numbness, and tingling in the neck, shoulder, arms, and hands (rare)
- Infection after surgery. Open fractures (when the bone breaks through the skin at the time of injury) have a higher rate of infection
- Malunion (when the fractured clavicle heals in a crooked and/or shortened position) of the fracture can result in shoulder pain and limitations
- Persistent bump or prominence at the fracture site
- Increased chance of repeat clavicle fracture
- Painful hardware requiring later removal

### General Treatment Considerations

For minimally displaced clavicle fractures, initial treatment consists of ice, compressive dressing, and over-the-counter medication to relieve pain and reduce swelling. An arm sling or shoulder immobilizer is usually recommended. Patients should avoid risky activities (including sports, overhead work, smoking, etc.) until the fracture is healed, usually at least six or more weeks. Pain will subside after two to four weeks as the fracture begins to heal and the patient will be able to begin to use the arm more comfortably for activities of daily living that do not involve overhead motion.

For significantly displaced fractures, open fractures, or fractures associated with neurovascular injury and multiple injured extremities, surgery is recommended. Surgery can stabilize the fracture in proper position to allow bone healing, and early mobilization. Surgery consists of making incisions, repositioning the fracture fragments, and holding them in place with plates, screws, wires, sutures, or pins. After fracture healing, these fixation devices may be removed if needed.

Exercises to regain shoulder motion and strength lost as a result of the injury and healing process are necessary before returning to sports and activities. These exercises may be done.



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on your own, or you may be referred to a physical therapist or athletic trainer for further evaluation and treatment. Return to sports requires healing of the bone and usually takes three to six months depending on the age of the patient and the severity of the fracture

### **Possible Medications**

- Your physician may prescribe pain relievers as necessary. Use only as directed.

### **Modalities (Cold Therapy)**

Cold is used to relieve pain and reduce inflammation. Cold should be applied for 10 to 15 minutes every two to three hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage with a cloth between the ice and your skin to prevent burning /freezing your skin.

### **Notify My Office If Symptoms Worsen**



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