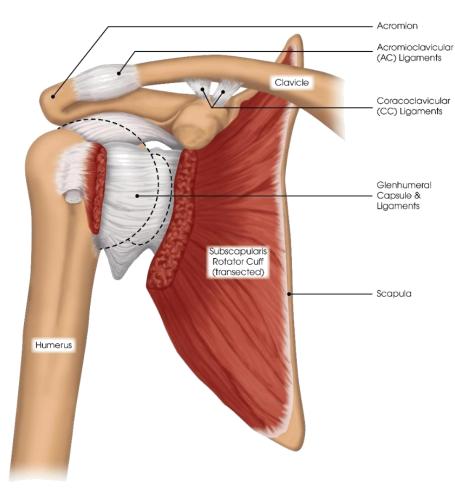
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Adhesive Capsulitis (Frozen Shoulder)

Adhesive capsulitis, commonly known as frozen shoulder, is characterized by loss of motion of the shoulder as well as pain due to inflammation and contracture (scarring and tightening) of the capsular tissue surrounding the glenohumeral (shoulder) joint.

The capsule and ligaments of the shoulder connect the head of the humerus (ball of the upper arm bone) to the glenoid (socket) of the shoulder joint. Typically, the capsule and ligaments that surround the joint are lax (loose) to allow the shoulder to move through a large range of motion. The capsule and ligaments are normally pulled tight only at the extremes of motion to keep the shoulder from dislocating. In a frozen shoulder, inflammation of the lining of the capsule and ligaments causes them to scar, thicken, and contract (shorten), which tightens up the shoulder, thus restricting movement and causing pain.

Anterior view of shoulder, with joint capsule revealed beneath the musculature







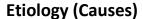


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Frequent Signs and Symptoms

- Stiffness and loss of shoulder range of motion occurring without a significant injury
- Pain around the shoulder, often along the side of the upper arm
- Pain that is worse at the end ranges of motion as it tightens the inflamed or scarred capsule
- Occasionally, aching when not using the arm
- Occasionally, pain that awakens the patient at night
- Occasionally, loss of strength or difficulty raising the arm



Development of inflammation of the capsule (cause is unknown)



Patient with a frozen shoulder displaying a limited range of motion.

Risk Factors

Systemic disease, particularly diabetes and thyroid disorders

Prevention

- Maintain appropriate conditioning:
 - Cardiovascular fitness
 - Shoulder flexibility
 - Muscle strength and endurance, particularly of the rotator cuff and scapular muscles
- With shoulder pain, continue to move/use the shoulder and seek medical attention early.

Outcomes

The prognosis for adhesive capsulitis is usually excellent. The natural history is for it to resolve on its own over a period of one to two years. Although most results are favorable, some patients that are not consistent in their efforts to regain shoulder motion may experience a permanent decrease in range of motion. Some rare cases require arthroscopic surgery and manipulation to regain functional motion and improve symptoms. Therefore, an aggressive and frequent daily stretching and rehabilitation program is strongly recommended. The assistance or supervision of an experienced physical therapist or athletic trainer is also strongly recommended



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Potential Complications

- Prolonged recovery time
- Permanent shoulder stiffness, symptoms, and physical limitations
- Shoulder deconditioning from disuse

Treatment Considerations

Initial treatment consists of therapeutic exercises to aggressively stretch the scarred and contracted capsule and ligaments. Stretching daily with great frequency (all day, every day), even despite discomfort, is important to hasten the recovery, restore proper shoulder mechanics and allow non-painful motion of the shoulder. Physical therapy can also be helpful to teach and supervise the exercise program. Additionally, a corticosteroid injection in the shoulder to calm down the inflamed capsule can be extremely helpful for patients who seek early treatment while the capsule is still inflamed. If a proper course of conservative treatment fails to restore adequate shoulder motion and does not relieve the symptoms, arthroscopic surgery and gentle manipulation followed by physical therapy may be required. Fortunately, if treated appropriately, most cases of adhesive capsulitis resolve within three to six months and do not require surgery. Recovery following surgery is more predictable and occurs within three to four months; however, there are risks associated with surgery. These include further scarring because of the trauma of surgery as well as persistent stiffness, particularly if the patient fails to be compliant with the postoperative rehabilitation program.

Possible Medications

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take
 within seven days before surgery), or other minor pain relievers, such as acetaminophen,
 are sometimes recommended. Take these as directed by your physician. Contact your
 physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Pain relievers are usually not prescribed for this condition except after surgery.
- Steroid injections reduce inflammation and can be helpful in certain cases but should be used with proper discretion.





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Modalities (Heat and Cold)

- Cold is used to relieve pain and reduce inflammation. Cold should be applied for 15 to 20 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.
- 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 My Office if Symptoms Worsen



