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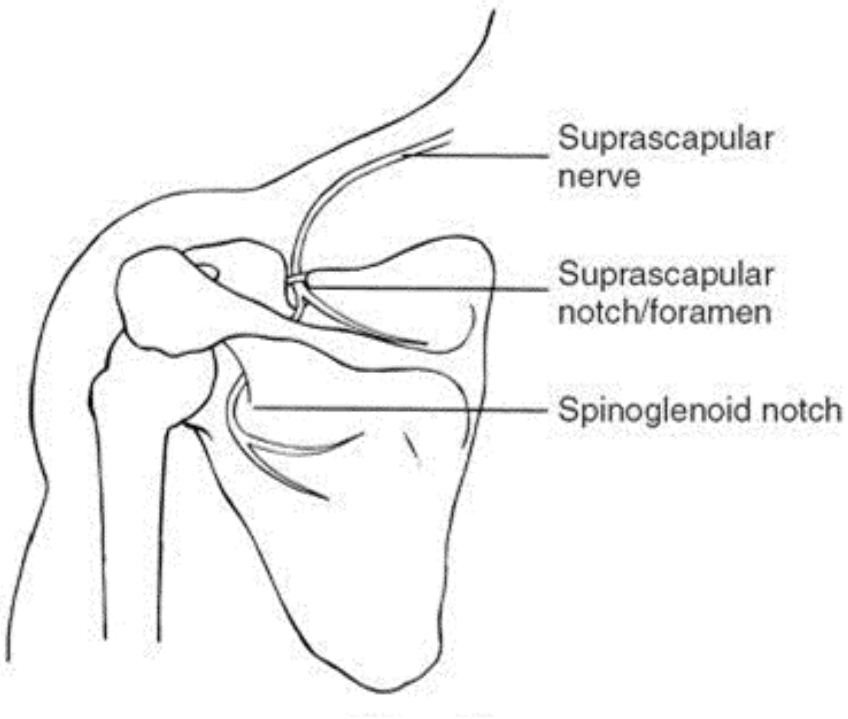
Suprascapular Nerve Entrapment

Suprascapular nerve entrapment is an uncommon nerve condition in the shoulder which results in pain and weakness. It involves compression of the suprascapular nerve at the top or back of the shoulder usually caused by a ligament, a cyst from the shoulder, or excessive stretching. The suprascapular nerve passes in a groove of the shoulder blade (scapula), under a ligament, then under the supraspinatus muscle (which it supplies) on the top of the shoulder, and then under another ligament before it divides and supplies the infraspinatus muscle in the back of the shoulder. The nerve may be injured or compressed before it supplies the supraspinatus muscle (thus causing weakness of both the supraspinatus and infraspinatus) or after it supplies the supraspinatus (causing weakness of only the infraspinatus). These muscles, which are part of the rotator cuff, are important in stabilizing the shoulder and assisting in raising and rotating the shoulder and arm.



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Frequent Signs and Symptoms

- Pain and discomfort (burning or dull ache) that is poorly localized, often in the top or back of the shoulder
- Heaviness or fatigue of the shoulder and arm
- Pain that may be made worse by exercise or raising the arm over head
- Weakness raising the arm to the side or overhead or rotating the shoulder outward
- Tenderness in the top or back of the shoulder
- Atrophy (shrinkage) of the supraspinatus or infraspinatus muscle

Etiology (Causes)

- Pressure on the suprascapular nerve at the top or back of the shoulder often by a cyst from the shoulder joint
- Pressure on the suprascapular nerve at the top or back of the shoulder by one of two ligaments of the shoulder blade that the nerve passes beneath
- Repetitive stretch injury to the nerve

Risk Factors

- Contact sports
- Sports that require repetitive overhead activity, such as baseball, volleyball, and tennis
- Poor physical conditioning (strength and flexibility)

Prevention

- Appropriately warm up and stretch before practice or competition.
- Maintain appropriate conditioning:
  - Shoulder flexibility
  - Muscle strength and endurance

Outcomes

This condition often resolves spontaneously with rest if it results from a mild stretch or repetitive injury. If the nerve is compressed, arthroscopic surgery to release and decompress the nerve is recommended.

Potential Complications

- Permanent weakness of the shoulder, particularly when rotating arm outward and lifting the arm, and inability to throw
- Persistent pain in the shoulder
- Increasing weakness of the extremity
- Disability and inability to compete

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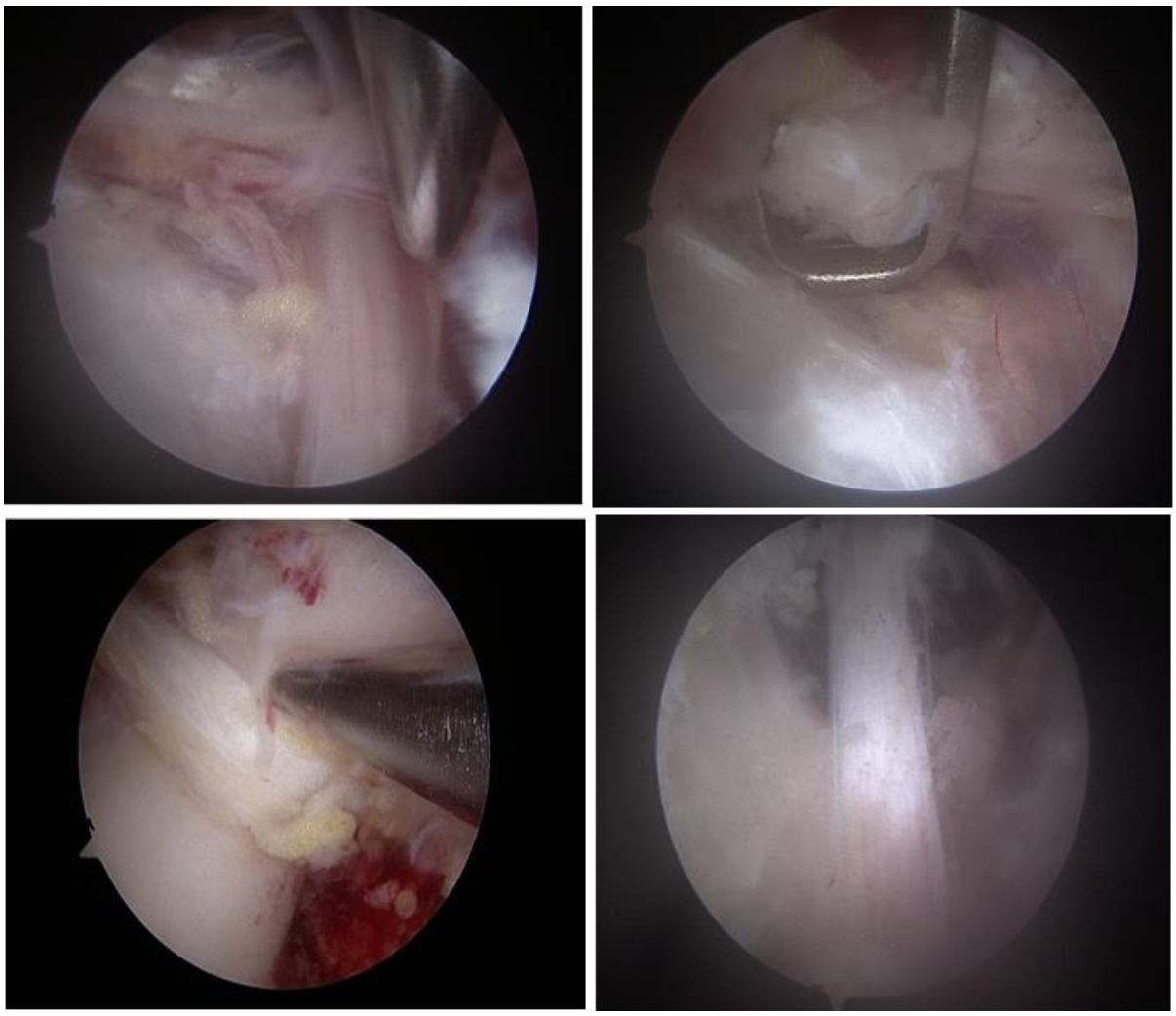
- Failure of the nerve to recover

Treatment Considerations

Initial treatment consists of rest from the offending activity and nonsteroidal anti-inflammatory medications to help reduce inflammation and pain. If three to six months of conservative treatment is not successful, surgery may be necessary to free the compressed nerve by cutting the ligaments where the nerve is being compressed. Surgery is also indicated to relieve pressure from a cyst by removing the cyst and repairing a labral tear within the shoulder joint that may be the cause of the cyst. Surgery may be recommended sooner if there is significant atrophy of the muscles. When surgery is necessary, it provides almost complete relief in most patients who undergo this operation, although the muscle atrophy may not be reversible.



Possible Medications

- Non-steroidal 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 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.
- Pain relievers may be prescribed by your physician, usually only after surgery. Use only as directed.

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