Spinoglenoid Cyst of the Shoulder

In order for muscles to work properly, the nerves that innervate (supply) them must also function appropriately. In some injuries, fluid may escape from the shoulder joint and form a cyst. Depending on the location of the cyst, nerves that pass nearby may become compressed in a smaller space due to the pressure from the cyst. When this occurs, nerve function decreases and the muscle may atrophy (waste away) and weaken.

Some patients may develop a spinoglenoid cyst from a superior labral or capsular injury to the shoulder. The cyst can grow below the spine of the scapula (which runs along the back of the shoulder) and above the glenoid (shoulder socket) in a location called the spinoglenoid notch. The suprascapular nerve runs through this area, and the resulting pressure causes atrophy in the infraspinatus muscle, which is one of the rotator cuff muscles. As a result of this cyst, the patient may experience pain and shoulder dysfunction as the infraspinatus weakens and is unable to perform its typical functions.

Spinoglenoid cyst as seen on MRI (axial view)
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
- Visible atrophy (wasting) of the infraspinatus muscle

Etiology (Causes)
- Injury to the capsule or labrum allowing fluid to escape and form a cyst

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
Some patients require surgical decompression to remove the cyst and repair any additional capsular or labral injury. If conservative treatment and rest has failed, or if there is significant atrophy of the muscle, the patient is a candidate for surgery.

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
- Inability to compete at previous level
- Recurrence of the cyst
Treatment Considerations
The presence of the cyst can only be confirmed with MRI, which will also provide information about additional damage to the labrum or other soft tissue. The status of the suprascapular nerve can be evaluated by nerve conduction studies (NCS) and electromyelography (EMG) to determine the location and severity of nerve compression. If there is significant nerve compression, surgery is indicated.

Using small incisions and an arthroscopic camera, Dr. Chudik is able to view and remove the cyst and repair any other shoulder injuries. If a repair of the labrum or other tissue is necessary, the patient will need to wear a sling for immobilization for approximately six weeks. The typical outcome for cyst removal or decompression is very good and patients usually see tremendous improvement in pain levels and muscle strength. In some cases, however, some muscle atrophy is not completely 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 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.
- 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

This information is provided by Dr. Steven Chudik. It is not to be used for diagnosis and treatment. For a proper evaluation and diagnosis, contact Dr. Chudik at contactus@chudikmd.com, or 630-324-0402.