Scapular Bursitis

OVERVIEW
Pain and inflammation can develop under the scapula (shoulder blade) as it glides over the chest wall. Repetitive and forceful motions can cause irritation, swelling, and scarring and lead to irregular motion with a feeling or sounds of grating, grinding, popping, or thumping. Sometimes the scapula will shift and pop with a loud clunk and patients sometimes think the shoulder is dislocating. This is called snapping scapula syndrome. Treatment is directed at reducing the inflammation and swelling and rebalance the muscles to control the scapula so that the motion is smoother and less painful. Sometimes, surgery is needed to remove thickened and scarred bursa tissue or remove bone edges.

BACKGROUND
The shoulder is made up of three bones: the humerus (upper arm bone), the clavicle (collarbone), and the scapula (shoulder blade). Shoulder motion is a combination of motion between the humerus and scapula and between the scapula and the chest wall. Below 90 degrees, most motion is between the humerus and scapula in the glenohumeral joint. Above 90 degrees, most of the motion is between the scapula and chest wall in the scapulothoracic joint. The shoulder as a combination of these two joints has more mobility than any other joint in the body.

There are two large muscles run beneath scapula and against the chest wall. The subscapularis muscle attaches over the front of the scapula and reaches to the front of the humerus, where it acts to internal rotate the arm. This is an important part of the rotator cuff. The serratus anterior muscle attaches along the medial edge of the scapula and passes in front of the scapula to wraps around the side of chest wall and attaches to the ribs on the side and front of the chest. It acts to stabilize the scapula and pull it forward. Other muscles controlling on the scapulothoracic motion include the latissimus dorsi (the "lats"), the rhomboids, the trapezius, and the pectoralis minor muscles. Additional muscles attaching to the scapula and acting on the humerus include the other rotator cuff muscles, the deltoid, biceps, and triceps, and several more arm muscles.

A bursa is a fluid-filled sac that cushions body tissues from friction. Several bursa are located under and next to the scapula. When bursa sacs become inflamed, the condition is called bursitis.
A bursa is a thin fluid filled tissue that allows for motion between bones and muscles. Forceful and repetitive motions done over and over again can cause a bursa become inflamed. Scapulothoracic bursitis refers to an inflammation in the bursas under the shoulder blade. This type of bursitis is most common in the upper corner of the scapula nearest the spine. It also occurs under the lower tip of the scapula. Inflammation includes an increase in the fluid and can lead to a build up of scar tissue, which will change the normal gliding motion and may cause sounds and sensations of grinding or snapping.

In other cases, the muscles under the scapula have shrunk (atrophied) from weakness or inactivity. The scapula bone then rides more closely to the rib cage. This means the scapula bumps or rubs on the rib bones during movement. Changes in the alignment or contour of the bones of the scapulothoracic joint can also cause snapping scapula. When a fractured rib or scapula isn’t lined up just right, it can cause a bumpy ridge that produces the characteristic grind or snap as the scapula moves over the chest wall. Grinding and snapping can also happen if there are any abnormal curves, bumps, or ledges on the upper edge of the scapula closer to the center of the back. These abnormalities include osteochondromas or Luschka’s tubercles.

**CLINICAL PRESENTATION AND DIAGNOSIS**
Grating, grinding, or snapping may be heard or felt along the edge or undersurface of the scapula as it moves along the chest wall. These grinding sensations are also called crepitus. Sometimes the joint pops or thumps during movement. Often, these sensations cause no pain.

Scapulothoracic bursitis, on the other hand, is painful whether or not there is any crepitus in the joint. The sore bursa is usually tender to the touch, and the tissue in the sore area often feels thick.

Your doctor will ask many questions about your medical history. The goal is to find out if you’ve had similar problems in the past, if you’ve injured your scapula, and if any of your activities require repetitive shoulder movements. Your doctor will also do a physical exam. He or she will check the alignment of the scapula. Your doctor will listen and feel while you move your shoulder and scapula. You may feel pain as you move, but it is important that your doctor knows exactly where your problem is coming from. By feeling the tissues around the scapula, your doctor may find out if the bursa is tender or thickened from inflammation.

Your doctor may order an X-ray to see between the scapula and rib cage. An X-ray image can show abnormalities in the bone, such as a rib or scapular fracture. In cases where there may be a problem with the bones, your doctor may order a CT scan to get a more detailed look. If bursitis
is suspected, an MRI may be used to locate the bursa and see how big it is. MRI scans use magnetic waves to show the soft tissues of the body in slices.

**TREATMENT**
Most doctors prescribe nonsurgical treatments for patients with snapping scapula. These types of treatments are generally successful, especially when the problem is coming from soft tissues. Doctors may start by prescribing rest and avoidance of aggravating activities. A sling may be used if pain is severe. NSAIDs such as ibuprofen may also help reduce inflammation and ease pain. Topical treatment including ice, heat, and topical ointments can also be a benefit for reducing pain and inflammation.

A home therapy program for muscle flexibility and strength is the key to returning to normal activities and avoiding recurrences. Therapy should start slowly and only after settling down the initial pain and inflammation. The therapy program starts with shoulder stretches and progresses to scapular muscle strengthening.

Surgical treatment is recommended only if nonsurgical treatments have failed. Surgery may be needed if the problem is caused by a bone abnormality. Surgery may involve removing a bony prominence or part of a thickened scarred bursa. Therapy is more involved after surgery, starting with shoulder rest with a sling and passive motion for 6-8 weeks. This is followed by a gradual program for flexibility and strengthening.

**MORE INFORMATION**
Further information can be obtained on the internet. Your local public library can help you explore these sources if you are interested. Two good sites for expert and peer reviewed information are the American Academy of Orthopedic Surgeons at [www.aaos.org](http://www.aaos.org) and [www.emedicine.com](http://www.emedicine.com).

**FEEDBACK**
If you have questions or comments, please contact the office or submit them to the web site at [www.pedortho.com](http://www.pedortho.com).