

OVERCOMING SHOULDER IMPINGEMENT SYNDROME



Relieving Pain

Impingement can be treated a number of ways. Your healthcare provider will discuss your treatment options with you. Many steps can be taken to relieve pain on your own at home. But in other cases, you may need treatment that requires your healthcare provider's help.

Finding the Best Treatment for You

Ice, heat, and medication can help relieve shoulder pain quickly. But if your pain continues, call your healthcare provider. Keep in mind that no two people are alike. You may need to try a few pain relief methods before you find the best one for you.

☐ Ice

Ice reduces inflammation and relieves pain. Apply an ice pack for about 15 minutes, 2 or 3 times a day. You can also use a bag of frozen peas instead of an ice pack. The bag will mold nicely to the shape of your shoulder. A pillow placed under your arm may make you more comfortable.

Note: Don't put the cold item directly on your skin. Place it on top of your shirt or wrap it in a thin towel or washcloth.

☐ Heat

Heat may soothe aching muscles, but it won't reduce inflammation. You can use a heating pad or take a warm shower or bath. Do this for 10 to 15 minutes.

Note: Avoid heat when pain is constant. Heat is best when used for warming up before an activity. You can also alternate ice and heat.

☐ Medication

Try over-the-counter pain relievers. Your doctor may also prescribe medication to relieve pain and inflammation. If so, ask how and when to take your medication. Be sure to follow all instructions.



IMPINGEMENT SYNDROME OF THE SHOULDER

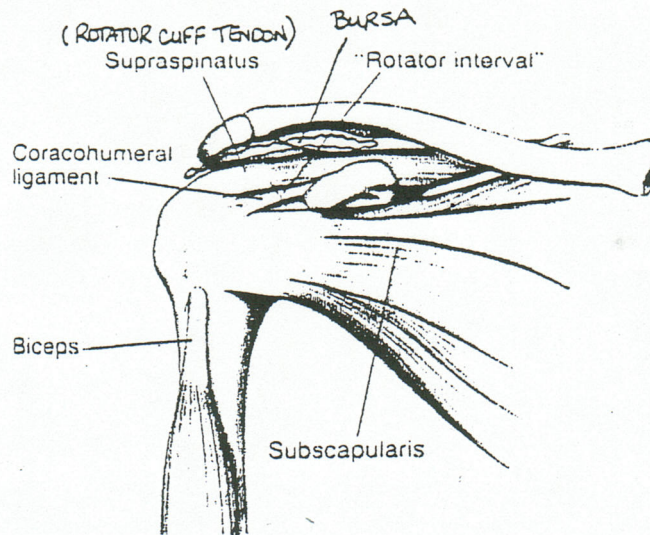


Figure 55-9 The rotator interval area of the shoulder.

Impingement syndrome of the shoulder is described as bursitis and tendinitis of the rotator cuff tendon. This condition may also be associated with bone spurs residing above and placing pressure downward on the tendon. In general, impingement syndrome is believed to result from a reduction of available space under the collar bone area where the rotator cuff tendon and bursa reside. It is the most common cause of shoulder pain seen in patients over the age of 35. The rotator cuff tendon is the structure responsible for elevating your shoulder arm forward and outward overhead.

This disorder has traditionally been classified into three progressive stages based on the degree of involvement of the rotator cuff. Stage I consist of inflammation and edema. Stage II involves fibrosis and tendinitis while stage III involves an actual rotator cuff tear which may be either partial or full-thickness. The rotator cuff tendon starts to degenerate in patients older than age 35 , making this tissue more vulnerable to irritation and inflammation. Repetitive overuse activities, overhead sports/job functions are also common causes of this condition. This condition can develop spontaneously with no particular inciting event. The most common complaint is pain which often begins gradually, frequently difficult to localize and often radiates down the upper arm outer side of the arm/deltoid muscle. Patients may also present with pain anteriorly (front of the shoulder) along the biceps tendon that radiates along the muscle toward the elbow. Night pain with an inability to sleep on the involved side is a very common symptom. Difficulty with overhead activities, weakness, fatigue, and stiffness are also typical symptoms. Activities of daily living that can be affected include dressing, washing, eating and toileting. There may be tenderness at the front of the shoulder. In patients with isolated shoulder impingement, there is, typically limited active, but full, passive range of motion. Impingement syndrome is primarily a clinical diagnosis based on the patients symptoms and physical exam findings.

X-rays are not necessary initially but may be obtained later if the patient doesn't respond to initial treatment. Bone spurs may be found which can cause this condition to persist. Recently, magnetic resonance imaging (MRI) has been used in the evaluation of rotator cuff pathology to assess the presence of a partial or complete rotator cuff tendon tear which can also cause impingement syndrome.

The vast majority of patients with impingement syndrome can be successfully managed nonoperatively. Nonoperative treatment includes: activity modification, nonsteroidal anti-inflammatory medications (e.g Motrin), subacromial corticosteroid injections, and stretching and strengthening exercises. It is important to consider the specific etiology of the condition when deciding on a specific course of treatment. A patient with an acute traumatic episode, for instance, is more likely to respond to a brief course of rest followed by an exercise program as opposed to a patient with a full-thickness rotator cuff tear who presents with chronic pain and weakness. In the latter situation, earlier consideration would be given towards surgical intervention.

Initially, a period of rest with avoidance of those activities that produce pain is recommended. This is especially important in athletes in whom overuse is the common mechanism of injury. During this time, patients are encouraged to substitute other activities to maintain endurance and muscle tone. Nonsteroidal anti-inflammatory medications may provide symptomatic relief and help alleviate acute pain to allow rehabilitation. Steroid injections can be effective in alleviating pain and improving shoulder range of motion for impingement syndrome in the short term. Multiple injections (>2) should be avoided, as their damaging effects have been well documented.

Specific rotator cuff stretching and strengthening exercises can be both therapeutic and preventative for impingement syndrome. The goal of stretching is to maintain shoulder range of motion and to prevent or correct any muscle imbalances or capsular contractures. Secondary adhesive capsulitis (frozen shoulder) is commonly encountered in patients with long standing impingement syndrome. Strengthening is the mainstay of treatment for patients with rotator cuff disease. The goal of strengthening is to rehabilitate a compromised, weakened musculotendinous unit. Rotator cuff strengthening exercises are commonly performed with the use of rubber tubing, resistive cloth bands, or free weights.

Surgical management is reserved for those patients in whom nonoperative treatment is unsuccessful. Surgical approaches can be divided into open or arthroscopic procedures. Both are equally effective but the arthroscopic procedures carry a shorter recovery time (~8wks). The primary goals of surgery are pain relief and restoration of function: the procedure used is subacromial decompression. A subacromial decompression is usually performed as an arthroscopic rather than open procedure. This procedure involves removing inflamed bursitis tissue and bone to open the space where the rotator cuff resides so that it may heal the inflammation. Recovery is usually 8-12 weeks with postop rehab during this time. Return to sports by 12 weeks is expected.

Understanding Shoulder Impingement

Impingement occurs when the subacromial space is too small to let the parts move easily. This may be caused by joint inflammation (swelling). Swollen parts of the shoulder take up more room, making the joint space smaller. The shape and condition of shoulder bones may also add to impingement.

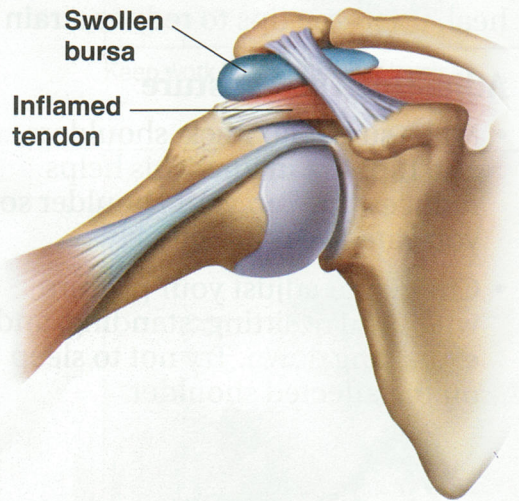
How Problems Begin

Shoulder problems develop slowly over time. You may not notice a problem until it causes pain. There are many factors that can affect your shoulder.

Overuse

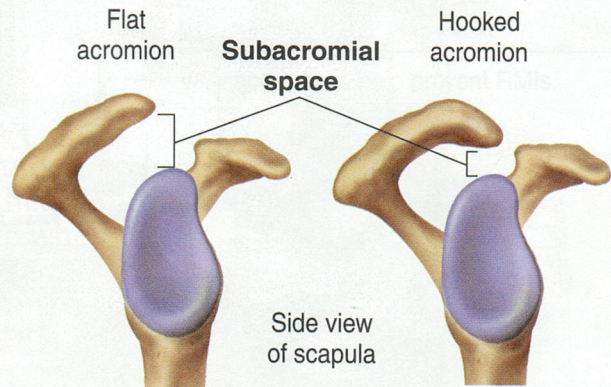
Constant shoulder use can irritate the tendons and bursa. Then the body sends more blood to the irritated areas, causing swelling. As the swelling gets worse, two problems can develop:

- **Bursitis** is inflammation of the bursa. The bursa fills up with too much fluid, filling and squeezing the joint space.
- **Tendinitis** is inflammation of the tendons. Swollen tendons make the joint space smaller.



Acromion Shape and Condition

The acromion is part of the shoulder bone. It may be flat or hooked. If your acromion is hooked, the acromial space may be smaller than normal. This makes you more prone to shoulder problems. Bone spurs (growths on the bone) can also narrow the subacromial space.



A hooked acromion makes the subacromial space smaller.

Other Causes

Your shoulder health may also be affected by poor posture, weak muscles, and other conditions.

Finding Relief

If shoulder problems remain untreated, they can lead to more serious problems. Read on to learn how to start treating your shoulder so it can heal.

Learning About the Shoulder

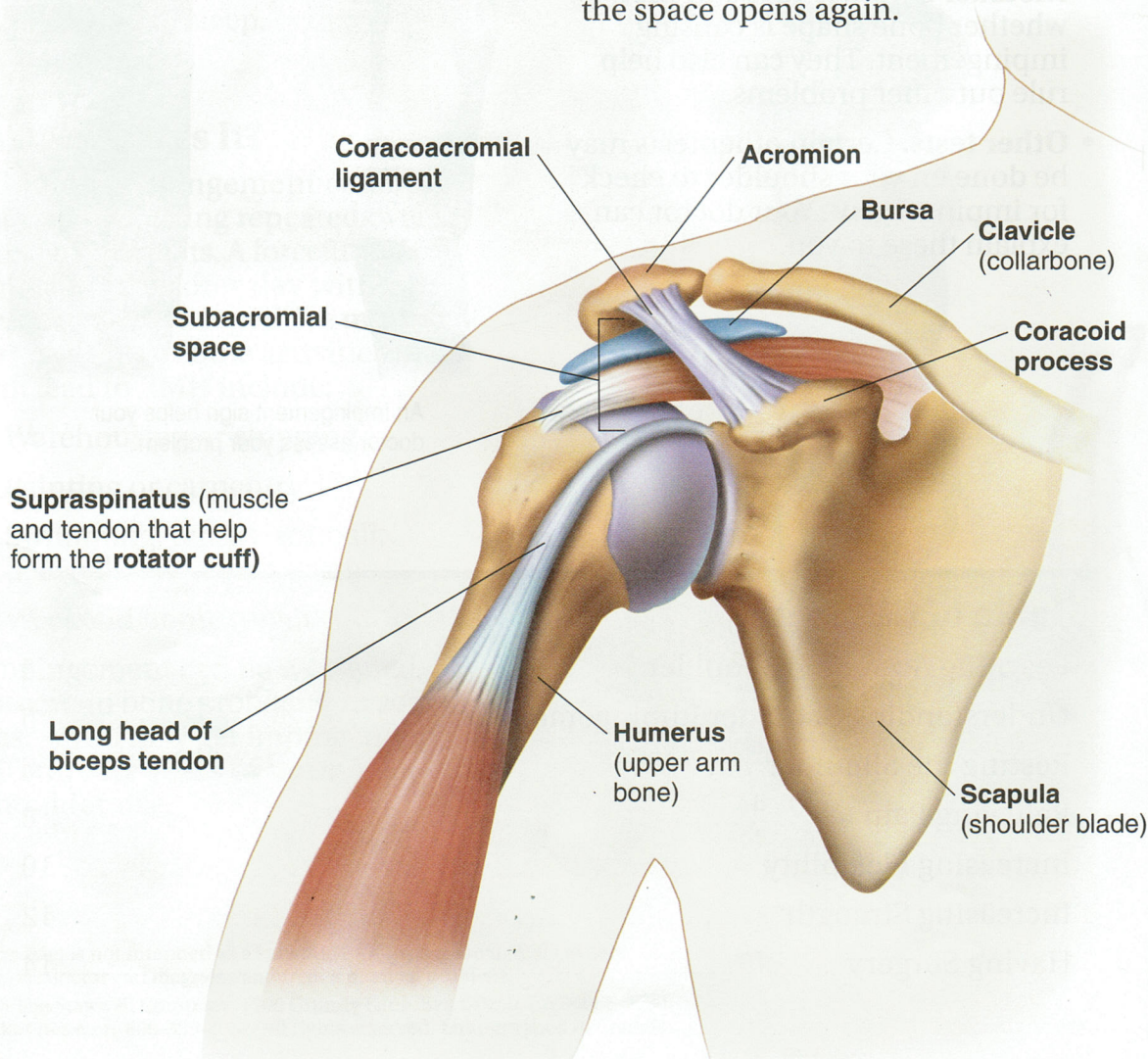
The shoulder is made up of bones, muscles, ligaments, and tendons. They work together so you can reach, swing, and lift in comfort. Learning about the parts of the shoulder and joint will help you to understand your shoulder problem.

The Parts of the Joint

The shoulder joint is where the **humerus** (upper arm bone) meets the **scapula** (shoulder blade). Muscles and ligaments help make up the joint. They attach to the shoulder blade and upper arm bone. At the top of the shoulder blade are two bony knobs called the **acromion** and **coracoid process**.

The Subacromial Space

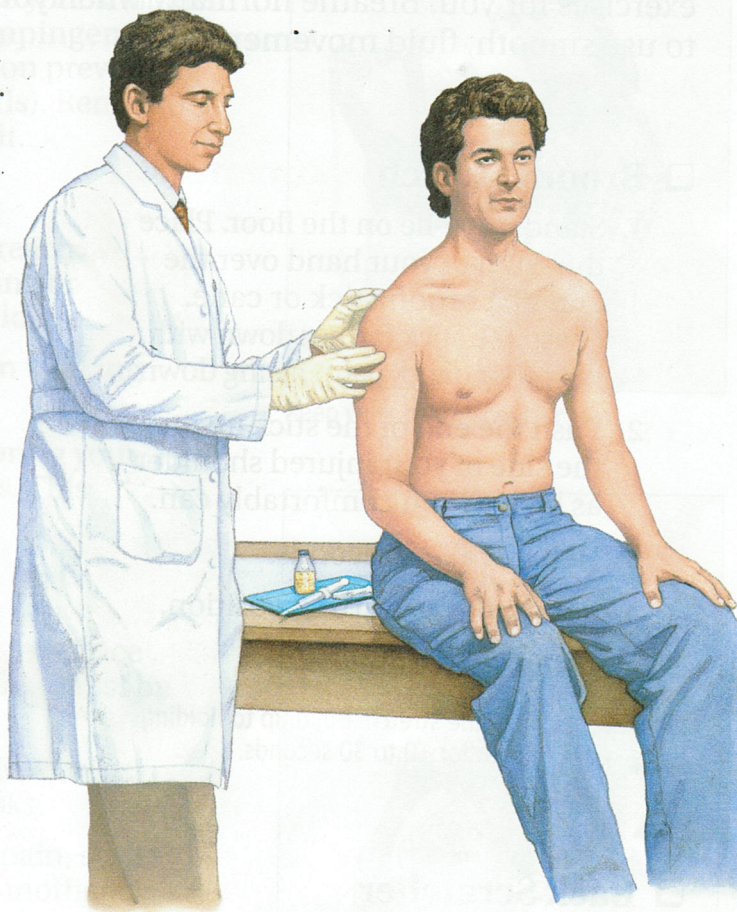
The subacromial space is between the top of the humerus and the acromion. This space is filled with tendons and muscles. This space also contains the **bursa**, a sac of fluid that cushions shoulder parts as they move. When you raise your arm, the subacromial space compresses. When you lower your arm, the space opens again.



❑ Injection Therapy

Injection therapy may be used to help diagnose your problem. It may also be used to reduce pain. The doctor may begin by numbing a small spot on the shoulder. He or she then injects an anti-inflammatory medication into the shoulder. It can take a few hours or even a couple of days before the injection helps.

Note: Talk to your healthcare provider about the possible risks and benefits of injection therapy.



❑ Electrical Stimulation

Electrical stimulation can help reduce pain and swelling. Your healthcare provider attaches small pads to your shoulder. A mild electric current then flows into your shoulder. You may feel tingling, but not pain.

❑ Ultrasound

Ultrasound can help reduce pain. First a slick gel or medicated cream is applied to your shoulder. Then your healthcare provider places a small device over the area. The device uses sound waves to loosen shoulder tightness. This treatment is also pain-free.

Using Your Shoulder Wisely

Making changes in how you use your shoulder can lessen your chances of impingement. The ideas below focus mainly on preventing repetitive motion injuries (RMIs). Remember, if a movement hurts, don't do it.

Positioning Your Body

- Keep your work within easy reach. This helps you avoid stretching or twisting your arms and shoulders.
- Avoid raising your arms when working above shoulder level.
- Use a stool or stepladder to bring your body closer to overhead tasks. This prevents awkward reaching.

Changing Tasks

- Vary your on-the-job activity to reduce the risk of RMIs. Limit tasks that must be done over your head.
- Give your shoulder enough time to rest and recover from stressful tasks.
- If one task causes you to feel pain, stop. Rest your shoulder. Go on to another task, if possible.

Limiting Force

- Limit activities that could strain shoulder muscles and tendons. This includes heavy lifting, pushing, and pulling. Get help when needed, or use dollies and wheelbarrows.
- Find the best tools for each activity. The best tool lets you use the least force.
- Rest before repeating a task that requires a lot of force. The more frequent the force, the greater the risk of RMIs.



Keep work below shoulder level.



Vary activities to help prevent RMIs.



Ask for help when you need it.

Before Surgery

You need to prepare ahead of time for shoulder surgery. Follow all your doctor's instructions.

- Stop taking anti-inflammatory medication, including aspirin, before surgery if directed.
- Tell your doctor about any prescription or over-the-counter medications, herbs, or supplements that you take. Ask whether you should stop taking any before surgery.
- Don't eat or drink anything after midnight the night before surgery. This includes water.
- Arrange for a friend or family member to give you a ride home.



The night before surgery, don't eat or drink anything after midnight.

After Surgery

You'll be taken to a recovery area after the procedure. A doctor or nurse will give you medication to relieve discomfort. Know that:

- If you had arthroscopy, you may go home the same day. If you had open surgery, you may need to stay overnight.
- You should ask about self-care before you go home. This may include wearing an arm sling, taking medication, or using ice.
- It may take a few months to feel the full benefit of the surgery.



Keeping your arm in a sling as instructed will help you recover faster.

When to Call the Doctor

After surgery, it's normal to feel some shoulder numbness for the first few days. But call your doctor if you notice any of the following:

- Excessive pain or swelling
- Excessive drainage from the wound
- Numbness in your fingers or hand
- Increased redness near an incision
- Fever or temperature of 101°F (38.3°C) or higher

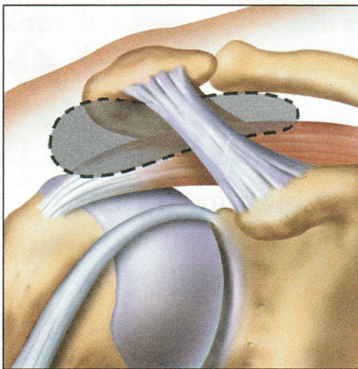
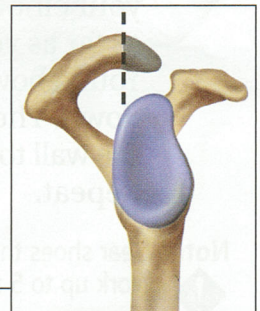
Having Surgery

For many people, self-care measures are enough to relieve shoulder impingement symptoms. But if self-care and other treatments haven't worked, surgery may be an option. Surgery can help free up the joint space, allowing pain-free motion. Talk to your doctor to see if surgery is right for you.

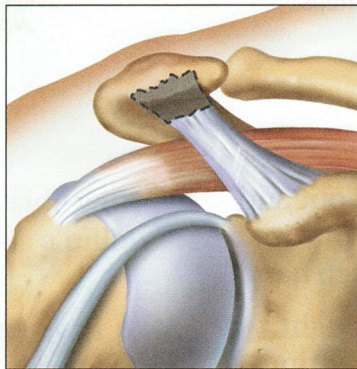
Surgery for Shoulder Impingement

The type of surgery you have depends on your shoulder problem. Surgery can remove the bursa if it is swollen. If the coracoacromial ligament is tight, it may be released. If the acromion is hooked or has bone spurs, a portion of it may be removed. Before surgery, you'll be given medication to keep you free from pain. There are different types of surgery:

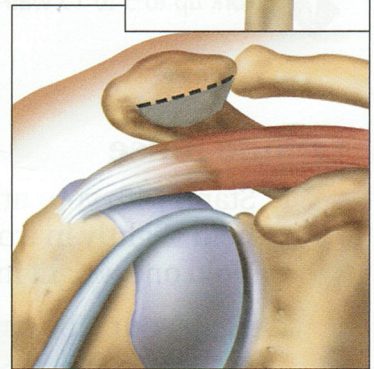
- **During arthroscopy**, small incisions are made in the shoulder. Next, a small lighted instrument (arthroscope) is inserted. A tiny camera is attached on one end of the arthroscope. The camera sends images to a video monitor, allowing the surgeon to see inside the shoulder.
- **During open surgery**, incisions are made in the shoulder so the surgeon can work inside.



A swollen bursa may be removed.



A tight coracoacromial ligament may be released.



A portion of the acromion may be removed.

Risks and Complications of Surgery

Your doctor will discuss the possible risks and complications of the procedure with you. These may include:

- Infection
- Damage to nerves or blood vessels
- Loss of flexibility