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## **Impingement Syndrome**

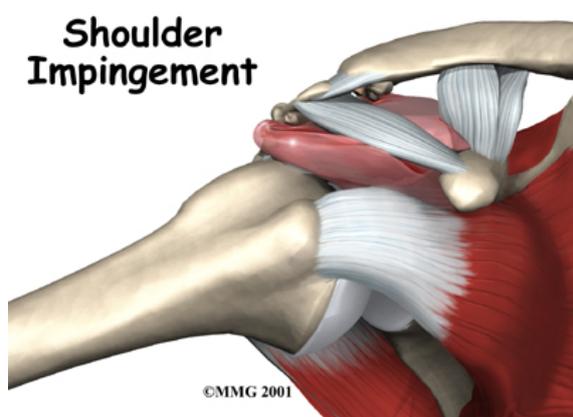
The shoulder is a very complex piece of machinery.

Its elegant design gives the shoulder joint great range of motion, but not much stability.

As long as all the parts are in good working order, the shoulder can move freely and painlessly.

Impingement syndrome occurs when the rotator cuff tendons rub against the roof of the shoulder, the acromion.

### **What part of the shoulder is affected?**



The shoulder is made up of **three bones**: the scapula (shoulder blade), the humerus (upper arm bone), and the clavicle (collarbone).

The rotator cuff connects the humerus to the scapula. The **rotator cuff** is formed by the tendons of four muscles: the supraspinatus, infraspinatus, teres minor, and subscapularis.

### **Why do I have problems with shoulder impingement?**

Usually, there is enough room between the acromion and the rotator cuff so that the tendons slide easily underneath the acromion as the arm is raised. But each time you raise your arm, there is a bit of rubbing or pinching on the tendons and the bursa. This rubbing or pinching action is called impingement.

Impingement occurs to some degree in everyone's shoulder. Day-to-day activities that involve using the arm above shoulder level cause some impingement. Usually it doesn't lead to any prolonged pain. But continuously working with the arms raised overhead, repeated throwing activities, or other repetitive actions of the shoulder can cause impingement to become a problem. Impingement becomes a problem when it causes irritation or damage to the rotator cuff tendons.

### **What does impingement syndrome feel like?**

1. Pain when raising the arm out to the side or in front of the body.
2. Most patients complain that the pain makes it difficult for them to sleep, especially when they roll onto the affected shoulder.
3. A reliable sign of impingement syndrome is a sharp pain when you try to reach into your back pocket.
4. As the condition worsens, the discomfort increases. The joint may become stiffer.
5. Sometimes a catching sensation is felt when you lower your arm. Weakness and inability to raise the arm may indicate that the rotator cuff tendons are actually torn.

### **What tests will my doctor run?**

1. The diagnosis is usually made on the basis of your medical history and physical examination.
2. X-rays to look for an abnormal acromion or bone spurs around the AC joint.
3. A magnetic resonance imaging (MRI) scan **may** be performed if your doctor suspects a tear of the rotator cuff tendons..
4. An injection of a local anesthetic (such as lidocaine) into the bursa can confirm that the pain is in fact coming from the shoulder. If the pain goes away immediately after the injection, then the bursa is the most likely source of the pain.

### **What treatment options are available?**

#### **Nonsurgical Treatment**

Anti-inflammatory medications such as aspirin or ibuprofen.

Resting the sore joint and putting ice on it can also ease pain and inflammation.

If the pain doesn't go away, an injection of cortisone into the joint may help.

A physical or occupational therapist.

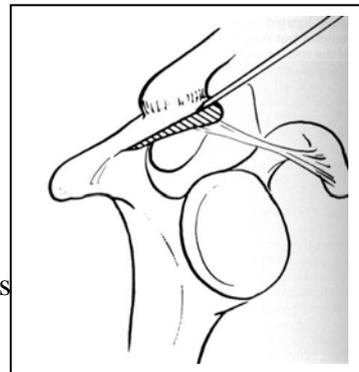
#### **Surgery**

##### **Subacromial Decompression**

The goal of surgery is to increase the space between the acromion and the rotator cuff tendons.

Taking pressure off the tissues under the acromion is called **subacromial decompression**.

The surgeon must first remove any bone spurs under the acromion that are rubbing on the rotator cuff tendons and the bursa.



##### **Excision lateral end of the clavicle:**

Impingement may not be the only problem in an aging or overused shoulder. It is very common to also see degeneration from arthritis in the AC joint.

The end of the clavicle may be removed during impingement surgery.

This procedure is called a resection arthroplasty. This procedure involves removing the last inch of the clavicle.

##### **Arthroscopic Procedure**

In some cases impingement surgery can be done with an **arthroscope**. The arthroscope is a small TV camera that can be inserted through a small incision. This allows the surgeon to see the area where he or she is working on a TV screen. Through other small incisions, the surgeon can insert special instruments to cut and grind away bone.

## **Rehabilitation**

A program of rehabilitation exercises.

It is important to maintain the strength in the muscles of the rotator cuff.