

Impingement syndrome causes shoulder pain with overhead use as well as reaching and lifting activities. It is caused by overuse and occasionally trauma. Impingement syndrome is usually treated nonoperatively, but persistent symptoms and pain can lead to operative intervention.

Rotator Cuff Anatomy

The tendons of the rotator cuff muscles surround the “ball” of the shoulder. They keep the ball of the shoulder centered on the socket. The supraspinatus tendon of the rotator cuff takes a course through an outlet made of bone to get to its attachment on the humerus or ball of the shoulder. The outlet has a ceiling made of bone called the acromion. The floor of the outlet is the bone of the shoulder ball. Normally the tendon slides between the bones with shoulder motion. A tissue bursa helps lubricate this motion so that the tendon glides smoothly. With overuse, or trauma, the bursa or tendon can get inflamed. An inflamed or irritated bursa is called bursitis. An inflamed tendon is called tendonitis. When this inflammation occurs, the tendon no longer glides smoothly and hurts when it is compressed, or impinged, against the bone. Because of this, patients with a spur of bone under the acromion can be more susceptible to this process. The most common complaints that patients with impingement have are pain with overhead activity and reaching and lifting. Shoulder weakness is also a common complaint. Most of the pain is usually located on the outside part of the shoulder. The pain can radiate to the neck or the elbow.

Radiographs or x-rays are taken in the office to show the bones of the shoulder. While the x-rays do not show rotator cuff tears or other muscle injuries, they do show the shape of the acromion and whether or not there is a spur. While not all people with a spur have impingement, the size of the spur gives an idea of how susceptible you may be to having the problem. An MRI scan may also be ordered to determine if a rotator cuff tear is present.

Non-Surgical Treatment Options

In order to help with the pain, as well as confirm the diagnosis, a steroid injection can be used. The injection is placed into the bursa under the acromion. This can give significant relief for a long time. However, if you get any pain relief, no matter how long, the area of shoulder irritation has been identified.

Most patients with impingement do not require surgery. The pain is usually self-limiting and can diminish quickly with rehabilitation. The goal of physical therapy is to restore the normal motion and strength of the shoulder. This requires some stretching exercises to loosen any shoulder tightness. Once the motion is reestablished, the muscles of the shoulder are strengthened. These exercises focus on the rotator cuff and the back muscles to restore the correct balance to the shoulder.

Surgical Treatment Options

If the symptoms remain persistent despite appropriate rehabilitation and rest for a period of three to six months surgical intervention may be necessary. This procedure is performed arthroscopically. Small incisions are made around the shoulder and a small camera is inserted into the joint. This allows adequate visualization of the bones, cartilage and muscles. Impingement is treated first with the removal of the thickened bursa and then with a smoothing out of the spur. This procedure opens up the space for the rotator cuff tendon so that the chronic inflammation is diminished healing can occur. While more normal activities are allowed four to six weeks after the procedure, full recovery may take up to six months.