

Shoulder Impingement

Description

Impingement is one of the most common causes of pain in the adult shoulder. It results from pressure on the rotator cuff from part of the shoulder blade (acromion) as the arm is lifted.

The rotator cuff is a tendon linking four muscles - the supraspinatus, the infraspinatus, the subscapularis, and the teres minor. These muscles cover the “ball” of the shoulder (head of the humerus). The muscles work together to lift and rotate the shoulder.

The acromion is the front edge of the shoulder blade. It sits over and in front of the humeral head. As the arm is lifted, the acromion rubs or “impinges” on the surface of the rotator cuff. Contact is normal but may result in progressive damage or irritation of the rotator cuff.

The pain may occur due to a “bursitis” or inflammation of the bursa overlying the rotator cuff or a “tendonitis” of the cuff itself. Chronic or continued impingement may progress to a partial or full thickness cuff tear.

Risk Factors/Prevention

Impingement is common in both young athletes and middle-aged people. Young athletes who use their arms overhead for swimming, baseball and tennis are particularly vulnerable. Those who do repetitive lifting or overhead activities using the arm such as paper hanging, construction or painting are also susceptible. Pain may also develop as the result of minor trauma or spontaneously with no apparent cause. Impingement or tendonitis is commonly seen in elderly people without an injury and is likely related to degenerative changes in the rotator cuff.

Symptoms

Beginning symptoms may be mild. Patients frequently do not seek treatment at an early stage.

Impingement commonly causes local swelling and tenderness in the front of the shoulder. There may be pain and stiffness when you attempt to lift your arm. There may also be pain when you lower the arm from an elevated position. Pain is commonly referred to the mid-arm.

As the problem progresses, you may have pain at night. You may lose strength and motion. You may have difficulty with activities that place the arm behind the back, such as buttoning or zipping. In acute bursitis, the shoulder may be severely tender. All movement may be limited and painful.

Diagnosis

To diagnose shoulder impingement, Dr. Norberg and his team will take a thorough history and physically examine your shoulder.

Dr. Norberg will likely take X-rays. The doctor may request further imaging studies, such as an MRI (magnetic resonance imaging). These can show fluid or inflammation in the bursa and rotator cuff. In some cases, partial tearing of the rotator cuff will be identified.

An impingement test, injection of local anesthetic into the bursa, can help to confirm the diagnosis.

Treatment Options

Initial treatment is conservative. Dr. Norberg will recommend that you rest and avoid overhead activities. He might prescribe a course of oral non-steroidal anti-inflammatory medication. Stretching exercises to improve range of motion in a stiff shoulder will also help.

Many patients benefit from injection of local anesthetic and a cortisone preparation to the affected area. Dr. Norberg may also recommend a program of supervised physical therapy. Treatment may take several weeks to months. Many patients experience a gradual improvement and return to function.

Treatment Options: Surgical

When conservative treatment does not relieve pain, or the cortisone injections provide only temporary relief. Surgery may be necessary. The goal of surgery is to remove the impingement and create more space for the rotator cuff. The most common surgical treatment is subacromial decompression or anterior acromioplasty. This is performed arthroscopically

Arthroscopic technique:

In an arthroscopic procedure, three small puncture wounds are made. The joint is examined through a fiberoptic scope connected to a television camera. Small instruments are used to remove bone and soft tissue.

Open technique:

Open surgery requires placement of a small incision in the front of the shoulder and detachment of the portion of the deltoid muscle. This is rarely performed by Dr. Norberg and is more of a historical reference.

Rehabilitation

After surgery, the arm is placed in a sling for a short period of time. This allows for early healing. As soon as you are comfortable, you may remove the sling and begin exercise and use of the arm. The surgeon will provide a rehabilitation program based on your needs and the findings at surgery. This will include exercises to regain range of motion of the shoulder and strength of the arm. Most people will be able to do most activities at and above shoulder height by six weeks. 3-4 months may be necessary to recover full shoulder function. 85% of patients are satisfied with the outcome of their surgery