

Dear Patient

Shoulder Impingement

Shoulder Impingement is a common cause of shoulder pain most often related to use of the arm in the overhead position. It may be triggered by repetitive use over a long period of time, a single episode of overload, or simply holding the shoulder in a poor position, as in sleeping with the arm under the pillow.

ANATOMY

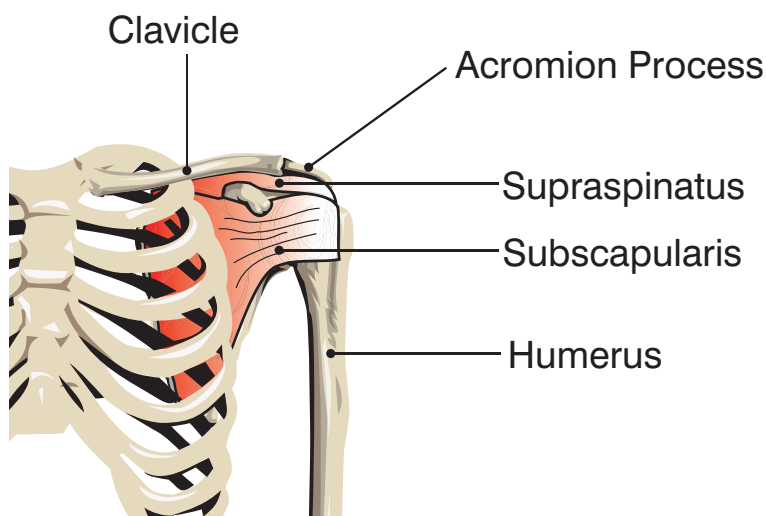
The shoulder is a 'ball and socket' type joint formed by the head of the humerus (arm bone) and the glenoid cavity of the scapula (shoulder blade). The joint is surrounded by a thin layer of connective tissue called the joint capsule and, at intervals, by ligaments. Compared with most other large joints, the shoulder's joint capsule and ligaments are relatively poor at providing stability but they do allow a good deal of mobility. Its mobility makes the shoulder joint very versatile but also makes it particularly susceptible to injury.

To compensate for the poor stability afforded by the joint capsule and ligaments, the shoulder relies heavily upon musculature to "hold things together". The muscles which control powerful movements of the shoulder are found in the back and chest regions. They provide little in the way of stability. Instead, the smaller "rotator cuff" muscles, supraspinatus, infraspinatus, teres minor and subscapularis, play an important role, acting together to hold the head of the humerus in its socket and maintain shoulder stability.

The tendons of the rotator cuff pass through a small space above the top (head) of the humerus wherein they are accompanied by a small sack of fluid. This sack of fluid is known as the subacromial BURSA and acts as a cushion, preventing the tendons from rubbing directly on bone.

MANAGING SHOULDER IMPINGEMENT

The best approach to managing shoulder pain associated with impingement is to treat the inflammatory condition initially, then find the cause of the impingement and manage that.



Above: The muscles of the rotator cuff viewed from the front. These muscles are easily impinged between the acromion process and the head of the humerus when the arm is lifted away from the body.

WHAT CAUSES SHOULDER IMPINGEMENT?

When the arm is lifted out to the side or above the head, the space between the head of the humerus and the acromion (subacromial space) becomes smaller.

This is the space occupied by the subacromial bursa and by the tendons of the rotator cuff.

Anything that compromises this space may cause the bursa and/or tendon(s) to be squashed or impinged.

This includes

- Weak rotator cuff muscles
- Muscle imbalance
- Bony projections into the space caused by abnormal anatomy and/or degenerative changes

When the subacromial bursa and tendons are impinged, they become irritated initiating an inflammatory reaction, causing pain and swelling. This further limits space in the subacromial area. Over time, the tendon may become fibrotic and weak due to the constant inflammation and at a later stage may even tear. Once a tendon is torn, recovery is poor and may require surgical intervention, so early treatment is imperative.

AGGRAVATING ACTIVITIES

- Sleeping on the affected side.
- Hanging out washing and other household duties where the arms are held above the head.
- Swimming, throwing and overhead sports such as baseball, tennis and volleyball.
- Driving with the affected arm resting on the windowsill or passenger seat.
- Household chores such as drilling, painting and using power tools.
- Carrying children.

SIGNS AND SYMPTOMS

- Aching in the shoulder radiating 1/3 of the way down the arm on the front or outside of the arm
- Sharp acute pain on sudden shoulder movements particularly overhead.
- Inability to sleep on the affected side due to a deep, dull shoulder ache.
- Difficulty with all overhead activities, particularly those which are repetitious.

REDUCING INITIAL PAIN AND INFLAMMATION

- Rest the injured shoulder. Avoid aggravating activities wherever possible.
- Heat may be applied over the painful region for 15-20 minutes every 2-3 hours.
- Anti inflammatory medications taken as prescribed.
- Gentle, pain free movements.
- Electrotherapy - ultrasound, interferential, laser.
- Strapping may help to reduce strain on the rotator cuff, improving pain.

PREVENTING FURTHER IMPINGEMENT

The impact of inflammation and degeneration may be reduced by:

- Strapping the shoulder to improve biomechanics.
- Postural re-education and training particularly around the shoulder blade.
- Rotator cuff stretching and strengthening.
- Mobilisation of the neck and spine to improve mobility and posture.
- Mobilisation of the shoulder joint.
- Myofascial release and massage of tight structures around the shoulder.
- Education - prevention strategies, recognising normal soreness vs signs of injury, and home management.
- Technique improvement - if sport-related, technique coaching may be necessary to prevent further similar exacerbations.

Your Practitioner will perform a detailed assessment so that an individual treatment programme can be provided using some or all of the strategies outlined above. Impingement syndrome is unlikely to disappear without an active treatment program.

Local steroid injections may be recommended by your doctor to rapidly reduce pain and inflammation.

In some cases surgery may be considered to repair significant tendon tears or to eliminate the cause of the impingement (for example removal of excess bony projections).

Your doctor may also recommend a diagnostic ultrasound to determine the site and extent of the damage. Quick and successful recovery is most likely in those who seek treatment early before extensive inflammation or tendon damage has occurred. Generally, tendons are slow to heal and healing time increases with advancing age.



Rotator Cuff Strengthening and postural re-education exercises may help to stop the cycle of aggravation and inflammation and prevent recurrence.

Disclaimer : The material contained in these pages is intended as a guide only and does not constitute advice or treatment. For further information, please see your qualified health professional.



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