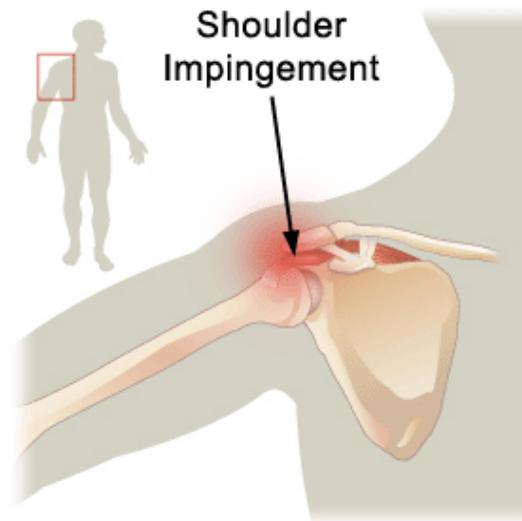


Shoulder Impingement

Background:

The shoulder is composed of three bones: the arm bone (humerus), the shoulder blade (scapula), and the collarbone (clavicle). The rotator cuff muscles stabilize this joint and can often be injured because of the amount of motion that takes place at the shoulder joint and the tight spaces that the muscles and tendons have to fit through. It is very often to see this injury in overhead athletes. The constant overhead activity causes these athletes to become much more vulnerable to this injury.



Cause:

Impingement occurs because of the gap that exists under the acromion process (on the scapula) narrows. The acromion process can rub against the tendon and/or the bursa (a fluid filled sac that lubricates the area) and cause irritation and inflammation in the shoulder, which will cause pain with movement.

Symptoms:

It is very common with rotator cuff impingement to have pain and discomfort when lifting the affected arm. This pain may also be elicited when lowering the arm from a raised position and could be accompanied by swelling on the anterior (front) portion of the shoulder. In the early stages of this injury most

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of the symptomology will be relatively mild. Having pain with movement, struggling with overhead activities, pain with handling weight, and even neurologic pain that radiates down the arm are all possible symptoms to experience with shoulder impingement. As the injury progresses the symptoms that the athlete experiences will become more serious. Some of these increasing symptoms include night pain that will cause lack of sleep, decreased strength, and a much greater loss of range of motion that is restricted because of pain.

Examination:

The doctor will take the athlete through a full examination to figure out what the diagnosis will be. They will start out with a full medical history; trying to figure out if it was a traumatic injury, if it is a reoccurring injury, and what symptoms the athlete has. From there the doctor will look for abnormalities with the area and note any tenderness. Then the doctor will put the athlete through tests in order to measure the amount of motion and strength each shoulder has and then compare them. It is possible for the doctor to order the athlete to receive an X-ray and/or MRI to confirm their diagnosis.

Treatment/Athlete Recovery:

The treatment for shoulder impingement is going to start conservatively and progress as the pain starts to go away. Everything that is going to be done will be in efforts to decrease pain and increase range of motion. For nonsurgical treatment, which is the most common treatment, relief from the injury will typically occur in 1-4 months but it will be a gradual improvement. The treatment will include rest, non-steroidal anti-inflammatory medications, physical therapy, and a possible cortisone shot that will be injected into the shoulder to decrease inflammation. If the non-surgical treatments do not fix the problem then surgical treatments will be used. This surgery will most often be arthroscopic and the surgeon is trying to create more space in the shoulder so the impingement will stop. It will take 4 months to a year for pain to be gone and full use of the shoulder to be restored.

Prevention:

Prevention of shoulder impingement is very important, especially in overhead athletes. Some things that have been shown to work best to prevent this injury:

- Eating green vegetables and omega-3 fatty acids
 - Fish
- Resting your shoulder whenever possible

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- Strengthening your supraspinatus muscle
 - It is important to make sure that you are not hypertrophying the muscle. Lightweight (no more than 5lbs) and high repetitions are optimal for strengthening this muscle. Hypertrophying this muscle will put the athlete at greater risk for shoulder impingement.
- Strengthening your other shoulder muscles (Deltoids, Serratus Anterior)
 - Strengthening these muscles will allow for less stress to be put on the small muscles that are within the shoulder that cause shoulder impingement.

Athletes At Risk:

Overhead athletes are most at risk for developing shoulder impingement problems. Baseball, Volleyball, Tennis, and Quarterbacks in Football should not be oblivious to this injury. Maintaining proper form and using the prevention guidelines will give the athlete an edge on shoulder impingement.

Professional Athletes With Shoulder Impingement:

Clay Bucholtz (MLB), J.D. Drew (MLB), Daniel Hudson (MLB), Kerri Walsh (AVP Beach Volleyball)

Relevant Articles:

Nothing 'Minor' About Shoulder Surgery

<http://sports.espn.go.com/mlb/columns/story?id=5568179>

Shoulder Impingement Rehabilitation

<http://www.peninsulaortho.com/downloads/Impingement.pdf>

Yoga Exercises For Impingement Shoulder & Rotator Cuff

<http://www.livestrong.com/article/405251-yoga-exercises-for-impingement-shoulder-rotator-cuff/>

Academic Journal Articles:

The Painful Shoulder: Shoulder Impingement Syndrome

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3785027/>

Optimal Management Of Shoulder Impingement Syndrome

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3945046/>

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Shoulder Impingement: Biomechanical Considerations In Rehabilitation
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3010321/>

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