

Impingement Syndrome

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Shoulder impingement syndromes are seen routinely in the chiropractic office and with the proper treatment, often can be resolved conservatively. You will tend to see this condition more commonly as your patients age, but it also is seen in younger patients who perform overhead movements repetitively (for example, swimmers) or overhead movements at high intensity (volleyball players, baseball pitchers, tennis players). This condition also can come on from postural stress over a prolonged period of time; for example, sitting at a computer year after year.

The acromion type of shoulder impingement has a significant impact on prognosis; it is seen easily on MRI and typically commented on in the report. With a type I acromion, the prognosis is better because the acromion is relatively flat. The end of the acromion tends to arc downward with type II, and downward more significantly with type III.¹ So, for example, a 20-year-old competitive freestyle swimmer who has a type II or type III acromion would be more difficult to manage successfully with a conservative approach. The arced or curved acromion, seen with a type II or type III acromion, creates a structural irritation to the subacromion space, irritating the supraspinatus tendon. Initially, the tendon is irritated somewhat like a blister that progresses with hypertrophy of the ligamentous structures in the area. This leads to progressive stenosis in the area and a more challenging case.

There are several tests to check for impingement, including Hawkins test, in which the patient's arm is brought forward to the sagittal plane and then internally rotated. A positive test would cause pain specifically in the area of the A/C joint. This is also called the coracoacromial - clavicular impingement test.^{2,3} Neer's test brings the arm up into full abduction to 180 degrees with passive forward elevation, and this impinges on the suprahumeral tissues.^{2,3} The impingement syndrome is sometimes divided into an internal and external impingement, whereby external impingement is related primarily to the bursal side of the tendon and the closeness of this side with the coracoacromial arch. The internal impingement is related more to the articular side of the tendon near the glenoid labrum. Either way, the tests described to evaluate this are clinically relevant.

With regard to treatment, I use a comprehensive approach, in that I utilize adjustments, stretching of shortened tissues, elimination of any trigger points, soft-tissue work for musculature adhesions and fibrotic tissue, and low-tech rehab. I typically also add some anti-inflammatory nutritional recommendations.⁴ When adjusting this patient, it is particularly important to evaluate the sternoclavicular joint, C/T junction, and upper thoracic area. Be very careful with the A/C joint and glenohumeral joint, as vigorous adjusting in this area can aggravate the tissues, and these areas are sometimes irritating if you bring the arm too high up for the pectoralis minor. So, you will need to be cautious, talk to your patient about discomfort, and perhaps start with the pectoralis major in a more horizontal fashion.

I do postisometric relaxation stretches, but there are other ways to stretch out those shortened pectoralis muscles and scalenes; this is really up to the doctor and his or her preference. The soft-

tissue treatments are varied and several are quite effective if you are proficient, including transverse friction at the musculotendinous junction and Graston Technique or Active Release Technique, etc., to the rotator cuff muscle adhesions and/or trigger points.

With regard to low-tech rehab, I start with the core because the first muscle that contracts with shoulder movement (in the non-low-back-pain population) is the transverse abdominis.⁵ I want the patient to have a stable foundation, because the scapulas and scapular stabilizers, including the rhomboids, middle and lower trap and serratus anterior are linked to the lumbar inner unit muscles via the thoracodorsal fascia. Scapular stabilization is very important in this condition because the rotator cuff muscles need something to anchor to, and an unstable scapula does not supply that. Regaining control of the scapula with modified push-ups to retrain the serratus anterior and middle and lower trap rehab, such as wall angels, will help stabilize the scapula and allow the rotator cuff muscles to start the process of returning to normal function.⁶ Once the scapulas are stabilized, rotator cuff rehab can be implemented. We have all seen patients who have done lots of rotator cuff rehab, to no avail. With some core stabilization and scapular rehab established first, your clinical success should improve significantly.

Learn to evaluate and treat these impingement syndromes, and you will expand your practice base. We are uniquely qualified as chiropractors to evaluate and treat these conditions successfully. Your patients will be most appreciative of you allowing them to avoid surgical intervention and returning them to their normal activities.

References

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4. Seaman D. *Clinical Nutrition for Pain, Inflammation, and Tissue Healing*. Nutranalysis, Hendersonville, NC, 1998: p.167.
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