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The Shoulder: Implications for the Overhead Athlete and Beyond
Disc One Title Tips

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You'll find a typeset transcript and an mp3 audio file of this lecture in the Extras folder on your DVD or in the digital download package.

Lindsay Whipple

The shoulder complex consists of the scapulothoracic joint, the glenohumeral joint, the acromioclavicular joint and the sternoclavicular joint.

We've made you a PDF of these title tips for your review. You'll find that in the Extras folder on your DVD or in the digital download package.

The subacromial space is tiny, and it doesn't take much to cause a problem in that decreasing space.

The latissimus dorsi attaches at the iliac crest, crosses over the back and goes over the scapula, then goes under the arm and attaches at the front of the humerus.

Even though we call this muscle group the 'scapular stabilizers,' the scapula isn't meant to be stable. Instead, we're looking for controlled mobility.

The main muscles that control scapular mobility are the trapezius and the rhomboids.

The serratus attached under the scapula, runs under the shoulder blade and attaches at the ribs. It keeps the scapula attached to the thorax.

This protruding scapula is called medial border winging, sometimes caused by the serratus anterior not working well.

When all is working properly, the scapulae lie flat against the rib cage.

The four parts of the rotator cuff are the teres minor, the infraspinatus, the supraspinatus and the subscapularis.

These externally and internally rotate the shoulder, and centrate the humeral head.

For more on myofascial slings, see Thomas Myer's work, Anatomy Trains at anatomytrains.com.

The diaphragm reaches from the thorax at T-6, down to the lumbar region at L-1.

The concept of myofascial slings reminds us that it's difficult to isolate an area since everything is interconnected.

Torsion from youthful throwing is called humeral retroversion, which allows more external rotation than normal.

For more on this, visit ajs.sagepub.com and search for *Hip and Glenohumeral Rotational Range of Motion in Healthy Professional Baseball Pitchers and Position Players.*

Charles Scott Sherrington, 1857-1952 Winner of the 1932 Nobel Prize for Physiology

Vladimir Janda, 1928-2002, developed the “crossed syndromes” in 1979. For more on this, visit jandaapproach.com.

In the Upper Crossed Syndrome, we see the head protrude, the chin juts forward, the shoulders round and we begin to see problems in the neck, shoulders and cervical-thoracic region.

In the Lower Crossed Syndrome, we see the pelvis in excessive anterior tilt, excess tightness in the hip flexors, and lower than normal response from the gluteal musculature.

Pavel Kolar’s approach is called Dynamic Neuromuscular Stabilization (DNS), which is based on developmental kinesiology. You can read more about DNS at rehabps.com.

In good postural alignment, the ear should be right over the shoulder. The shoulder is right over the hip. The hip is right above the knee. The knee is right above the ankle.

This concept of the “old system” is flexion, folded inward, whereas the “new system” is extension—expanding outward.

When the low back rounds, the head juts forward and the t-spine rounds. This naturally reverses when sitting tall.

The inside border of the scapula should lay flat, and not rotate or tilt in any direction.

The scapula should rest at around T-4, and not be elevated or depressed.

There are multiple causes of medial border or inferior angle winging of the scapula, and when you see either one, you’ll need to investigate further.

The acromioclavicular joint (AC) should be about one inch higher than the sternoclavicular joint (SC).

The humeral head should be positioned about a third of the way in front of the AC joint, and about two-thirds behind it.

Looking at the arms from the back, you want to see the bony part of the elbow. From the front, you’d like to see a little more of the palm than the back of the hand.

Is the head forward of the shoulder, or does the ear align with the AC joint?

At the lumbar spine, is there excessive anterior tilt, or is there posterior tilt? Is the t-spine fairly flat, or is there a hump there?

You’ll find the Functional Movement Screen (FMS) overview in the Extras folder on your DVD or with the digital download. For more on the FMS, visit functionalmovement.com.

The shoulder mobility test looks at rotation at the shoulder, as well as rotation and extension of the t-spine.

On Disc Two, Sue will show you her favorite corrective techniques to address shoulder problems you’ll commonly see in your athletes and patients.

Don’t forget to review the transcript, audio file, tips PDF and other material in the Extras file on your DVD or with the digital download.