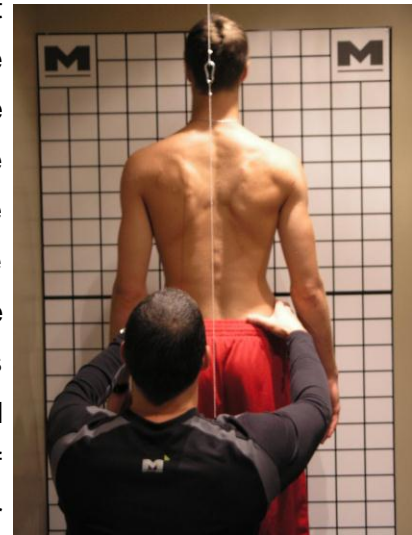


Scapular Stability

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The arm requires a great deal of mobility but still needs to be stable enough so that its movements can be accurate and generate force. Both acute and chronic injuries usually stem from, at least in part, a compromise in the scapular stabilizing muscles.

The shoulder complex is comprised of three joints; the joint between the clavicle (collar bone) and sternum (breast bone), the joint between the scapula (shoulder blade) and clavicle, and the joint between the scapula and the humerus (upper arm). These joints allow a great deal of mobility but little stability as the sternoclavicular joint is the only joint that actually connects with the skeleton. Stability is created through the muscles that run from the shoulder complex to the thoracic cage (ribs and spine). This is where it gets tricky – our acts of daily living, our posture and physical activities (not to mention previous injuries to any one of the three joints listed above) all influence how these scapular stabilizing muscles function (or don't function, as the case may be!).



When a person stands with good posture, with their shoulder in a neutral position, an equal amount of tension is distributed, and therefore, minimal stress in all of the supporting connective tissue and musculature. When a person has poor posture, with rounded forward shoulders and a forward head, there is an imbalance between the muscles to the front of the person and to the back. If you think of muscles being like an elastic band, some of those bands are being stretched and some have been shortened. Muscles at the front of the person's shoulder and chest are usually tight, and muscles to the back stretched. These muscles that are stretched, in particular the rotator cuff muscles and the muscles that attach the scapula to the thorax, are therefore in a weakened position. This lengthened position not only makes them more vulnerable to injury but it changes the mechanics of the shoulder joints which can make you more prone to other injuries as well.

The rotator cuff muscles all originate from the scapula and insert onto the humerus. Their job is to stabilize the head of the humerus during arm movement and to pull the head of the humerus

down so that it doesn't 'bang up' against the other structures within the glenohumeral joint causing pain, inflammation and injury. With poor posture, these muscles are stretched, are in a weakened position, and are more vulnerable to injury (both acute and insidious onset).

The scapular stabilizing muscles connect the scapula to the thorax. Their main function is to control the movement and position of the scapula so that a person can attain the necessary range of movement. With poor posture these muscles are generally weak and/or not firing properly at all. If they aren't doing their job the position and movements of the other three shoulder joints are compromised making a person more susceptible to injury. In a neutral position the scapula should be resting against the rib cage with little to no tension in the neck muscles. When moving the arm the scapula should rotate to increase overall freedom of movement for the arm, however it should not elevate – the shoulder itself should not be lifted upwards.

In summary, good posture makes for strong and healthy shoulders! Working out is an ideal time to pay a little attention to these small but critical muscles – placing your back, head and shoulders in a neutral position prior to initiating any exercise, and then maintaining that neutral position as you move your arms, is a great way to strengthen these muscles. If they aren't strong enough to maintain a neutral position then weight should be backed off the exercise until you can once again maintain neutral. There is a reason why we focus on good posture...