

Diaphragmatic Performance

The diaphragm is truly a center point of our muscular system, from its control of our oxygen intake to the response it has with our nervous system one can truly note its importance in sustaining life and wellbeing. Reduction of muscular synaptic response of the diaphragm only leads one to an impaired breathing pattern leading to reduced physical performance.

Originating on the inner surfaces of the lower 6 ribs the diaphragm has a proximity to the thoracic spine. During compound weightlifting, one would like to note thoracic spinal extension and stability. Often however the capability of our bodies to engage thoracic extension only leads to a cascade of compensation that potentially may reduce active or passive functions at each respective joint or region of the body. Thus, when we look closer at the diaphragm we may note a dramatic relevance of bio mechanical inefficiency related to improper breathing cycles coupled with restrictive muscle tone.

The flexion or extension of any muscle will lead to a relative effect occurring either to the antagonist or surrounding synergists. Diaphragmatic restriction thus may lead to possible restriction of all the surrounding fibers located near to or around the thoracic spine, which accounts for 90% of our body's main stabilizers. One of the biggest inhibitory effects the diaphragm may have is that of the psoas muscle. The psoas is responsible for both active hip flexion and assists in hip extension whilst also stabilizing the lumbar spine. As diaphragmatic restriction may cause psoas inhibition the outcome will be that of severe restriction in hip mobility leading to excessive force on the knees and lumbar spine.

Breathing is essential and a host of accessory muscles assist in the process this when our prime mover for breathing (diaphragm) is inhibited our synergistic muscles may have to work harder than we wish. Excessive strain of the scalene as per example will more than likely create scapula misalignment leading to possible strain to all the muscles associated with the scapula (there are a lot).

Stress and lifestyle truly effect our bodies like never, which is why it is imperative that we understand concepts of recovery and symptoms of stress. Only when we listen to our bodies will we be able to strive toward a pain free active lifestyle.