



BREATHING

Effective “abdominal” breathing, (using your diaphragm), is at the heart of musculoskeletal wellbeing. This has been recognised for thousands of years and is at the core of the yoga and meditation traditions. Even before we are born, we start practicing breathing with our diaphragms. The best breathing pattern is deep and slow through the nose. When we are breathing well, our abdomen should expand outwards as the diaphragm descends on inhalation and move inwards as we exhale. This is how babies breathe when they are born. Unfortunately many people get out of this habit and do most of their breathing through their upper chests. This “emergency” pattern of breathing goes hand in hand with the stress response and leads to all sorts of problems.

Three important things that diaphragmatic breathing assists are:

1. Core activation – the diaphragm is the big domed muscle that sits between the base of our lungs and the abdominal contents below. In the modern concept of the “core”, it is the “top of the barrel”, with the pelvic floor being the bottom and the transverse abdominal wall muscles being the hoops of the barrel. If the barrel doesn’t have a top on it, then no stabilising pressure can be built up. We therefore need the diaphragm to be working to help support our backs!
2. Relaxing our shoulder yoke muscles – many people in our modern world tend to chronically overuse their neck and yoke muscles for breathing, particularly in response to perceived mental stresses. These “accessory muscles of respiration” were only ever meant to be used in emergencies – when we kicked in our “fight or flight” system to escape physical danger.

Overloading these muscles puts their owners at risk of pain and stiffness, often referring into the neck, head and down the arm.

Use of the diaphragm is the natural antidote to over-activation of these accessory muscles of breathing. Essentially, when we use the diaphragm to breathe, the emergency muscles are turned off (inhibited). This inhibition also applies to our brain over-activation – deep breathing slows the brain wave frequency. This is probably the key insight that all of the meditative traditions are based on.

3. Improving body acid balance – diaphragmatic breathing ventilates the whole of the lungs. This balances carbon dioxide and oxygen in the blood and optimizes long term body performance. Stress breathing focuses air movement in the top of the lungs. Differences in blood supply mean that more carbon dioxide gets breathed out, which tends to lessen the acidity in our bodies - away from optimal levels. This in turn increases muscle tone and the muscles fire off much more easily. Whilst this was useful in escaping from Sabre Tooth Tigers in the past, it sets our modern “stressed” individual up for lots of muscle pain.

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This information sheet is designed as general advice only and does not take into account specific patient circumstances. It should not replace individual assessment by a health practitioner.

Reference: “Breathing Matters” by Dr Jim Bartley; www.breathingmatters.com