

## Stand Tall & Breathe - You Got This!

### Posture

- **Q:** Is posture really that important?
  - **A:** As an athlete, your ability to maintain and practice healthy posture is essential. In fact, poor posture brought on by poor habits, tight muscles, weak muscles, pain, or instability can affect your everyday life in and out of athletics. For instance, general poor posture can cause your athletic performance to decline and repetitive, asymmetrical postures can cause various injuries and even bone structure changes.
- **Q:** What does good posture look like?
  - **A:** Posture can be assessed in numerous ways. For example, when standing, look at yourself from a side view. You should see your ear lobe over your shoulder, your shoulder over the center of your hip, your hip over the midline of your knee, and your knee over the center of your ankle. You can also look to see if your spine demonstrates the correct curvature pattern with your cervical (neck) and lumbar (lower back) segments having concave "lordosis/lordotic" curves, and your thoracic (upper back) and sacral (tailbone) segments having convex "kyphosis/kyphotic" curves. While assessing seated posture, a good rule of thumb is to keep your hips, knees, and elbows all at 90-degree angles, with your feet flat on the ground and the backs of your thighs supported. It is also important to keep in mind that while sitting for long periods of time, it is vital for optimal health/wellness to move around and change positions every 20 minutes. Lastly, another way to check your posture is to lean into a door jamb and feel your body/spine line up against it. You should feel the back of your head, the space between your shoulder blades, and your tailbone all make contact with the door frame. Additionally, your knees should feel relaxed, not touching the door jamb, and your arms should be resting gently at your sides.
- **Q:** How can I improve my posture?
  - **A:** There are several things you can do to improve your posture including elongating your spine by thinking about being tall, tucking your chin by pulling your ears back over your shoulders (while keeping your nose level), squeezing your shoulder blades together, tightening your abdominal muscles to flatten your back, checking to see if you're keeping your knees soft, and balancing your weight over the arches of your feet. Also, if you notice any tight muscle areas, be sure to massage and stretch them, and if you notice any weak areas, be sure to strengthen them. Remember, poor posture throughout the day will hurt your athletic performance later on.
- **Q:** What are some benefits to having good posture?
  - **A:** There are countless physical and psychological benefits that come with working on your posture. These include improving your muscle balance, organ wellness, circulatory wellness, neural wellness, hormonal balance, feeling of overall wellbeing, and feelings of power/confidence, all of which help you become a better athlete.

### Diaphragmatic Breathing

- **Q:** What is diaphragmatic breathing?
  - **A:** Diaphragmatic breathing is the most efficient way for us to breathe, using our diaphragm muscle (a large dome-shaped muscle that attaches to the ribs, sternum, and spine) to facilitate the expansion of our lungs. When we were born, we all breathed this way, but as we grew up a lot of us changed how we breathed to a less efficient chest breathing style.
- **Q:** Why is diaphragmatic breathing better for me?
  - **A:** Diaphragmatic breathing provides numerous benefits such as improving whole body communication and regulation by stimulating the vagus nerve, balancing oxygen and carbon dioxide levels in the blood and intercellular fluid, reducing stress by lowering stress-related hormones in the blood by improving parasympathetic neural response, reducing blood pressure, boosting the function of the lymphatic system, reducing lactic acid build-up in muscle tissue, strengthening the immune system, improving general mood by elevating serotonin and other endorphin levels, reducing the risk of diabetes by strengthening the insulin beta receptor sites to stabilize blood sugar, improving mental focus and concentration by increasing oxygen flow to the pre-frontal cortex of the brain, increasing a general sense of calm and wellbeing, and improving digestion, all of which help you become a healthier individual and a better athlete.
- **Q:** How can I check if I am breathing correctly?
  - **A:** With diaphragmatic breathing, during inspiration, our diaphragm and external intercostal muscles contract, causing our ribs to elevate, sternum to flare, and lungs and belly to expand. Then, during expiration, our diaphragm and external intercostal muscles relax, causing our ribs and sternum to depress, and belly to go back to normal. To encourage diaphragmatic breathing, think about expanding your belly to breathe, as that will contract the diaphragm. Then, to test if you are doing it correctly, simply place one hand on your chest and one hand on your stomach. When you are breathing, your stomach hand should rise and fall with minimal to no chest hand movement. You can assess this in any position including lying on your back, sitting, and standing. You can also increase the difficulty by adding everyday tasks (chores, sports movements, tai chi, etc.) in while you are assessing yourself. Furthermore, you can also try different breathing exercises, such as breathing in a 1:2 ratio by practicing breathing in for 4 seconds and out for 8 seconds, or breathing in for 2 seconds, holding it for 2 seconds, and then out for 4 seconds.

Remember, it is important to practice proper posture and optimal breathing exercises daily!

"An ounce of prevention is worth a pound of cure" - Benjamin Franklin