



## Breath - Why It's So Important

*"Movement facilitates breath, and the breath facilitates movement" - Joseph Pilates*

When entranced watching a dance performance, do you ever find yourself moving with that dancer or even breathing with them? Breath is just as much a part of movement and expression as the actual dance steps. But it is also important for the dancer body for other reasons as well.

"The Core" gets a lot of press, and rightfully so, but what is it? Most people automatically answer abdominals but it's so much more. Your core has a front, back, sides and a floor and a ceiling. The abdominals and the multifidus (deep back muscles) encompass the front, sides and back but it's the pelvic floor and the diaphragm that encompass the floor and ceiling of the core and are just as important as those abdominals.

### **Anatomy of the Diaphragm and its Impact.**

The diaphragm is like a parachute where the edges connect the inside of your lower ribs and there is a central tendon that connects to your spine. So if there is improper diaphragm mechanics during breath there are direct consequences to the low back. The diaphragm tendon insertion also leads into the infamous psoas muscle; this is often discussed in relation to back and hip injuries. One other indirect consequence of poor mechanics of breathing is accessory neck breathing which causes increased neck tension. This accessory neck breathing occurs because the normal muscle responsible for breathing (the diaphragm) is not efficient enough and the neck muscles try to help out for better or worse.

### **Diaphragm and Dancers**

Do you need to be able to breath while you dance and perform? Do you need your core to dance well? Can you breathe while you perform your core conditioning? Learning how to breath with your core is of utmost importance to any person but especially to a dancer because of their need for core control, proper alignment and placement and of course endurance. Unfortunately, belly breathing and millions of crunches will not accomplish this.

*"Above all, learn how to breathe correctly." - Joseph Pilates*

### **"So How Should I Breath?"**

Many people talk about diaphragmatic breathing. Not everyone is talking about the same thing; most people are actually talking about belly breathing. Belly breathing is technically diaphragmatic breathing but for obvious reasons, I am not going to promote belly breathing for dancers: a dancer can't have their belly pushing out while they are dancing, it's technically incorrect and not aesthetically pleasing, and when the belly expands too much (a little is normal) one loses the synchronicity of the abdomen and pelvic floor maintaining proper core control.



Instead, the lumbar paraspinal muscles will overwork and/or the neck muscles and can contribute to compression of the low back and tight, sore necks.

### **“So What Is Good Diaphragmatic Breathing? What Does It Look Like?”**

First, one needs to exhale... completely (almost - it’s actually impossible to fully empty the lungs of air without the lung being collapsed). When we exhale the diaphragm domes up and relaxes so it can prepare to contract during inhalation to pull air in. This is the best time to access those pelvic floor muscles and deep abdominal muscles which help the exhalation process by pulling the lower ribs down and narrowing the waist. The difficulty is keeping the deep abdominals on when we inhale.

When inhaling, the diaphragm contracts pulling air in. This is when most people lose their core control. The belly may expand a little but the rib cage should also expand in 3 dimensions - the front, back and sides (where the lungs are). It is the deep abdominals that keep the air from pushing out the belly and allow the ribs to expand. If a person doesn’t breathe and expand the ribs in all these dimensions, the ribs get tight and lose elasticity. The hardest for most people is the back of the ribs, and when that area gets tight, the low back gets tight with them.

Poor breath mechanics are also linked to fatigue, lightheadedness, panic attacks, anxiety and even irritable bowel syndrome. Signs of inefficient breathing are shallow rapid breaths, frequent gasps, sighs or yawns and the tendency to hold the breath during a difficult task when stressed or even at rest due to habitual poor breathing. How many breaths do you take in a minute at rest?

Normal resting breathing rates:

Adults: 12-18 breaths per minute

Teens: 12-16 breaths per minute

School-Age Children: 18-30 breaths per minute

*“Breathing is the first act of life and the last. Our very life depends on it. Since we cannot live without breathing it is tragically deplorable to contemplate the millions and millions who have never mastered the art of correct breathing.” - Joseph Pilates*

---

This resource paper was written by Sarah Petrich, PT, DPT, PRC, PMA®CPT under the auspices of Minnesota Dance Medicine Foundation

**THIS RESOURCE PAPER MAY BE REPRODUCED IN ITS ENTIRETY FOR EDUCATIONAL PURPOSES, PROVIDED THAT ACKNOWLEDGEMENT IS GIVEN IN WRITING TO “MINNESOTA DANCE MEDICINE FOUNDATION.”**

Copyright © 2016 by Minnesota Dance Medicine Foundation