THE IMPORTANCE OF BREATH

Part of Ai Chi, Yoga, Tai Chi practice is building your ability be present and notice what is happening (Clark 2016). The practice of breath awareness guides attention inward. From a yogic perspective, pranayama is the practice of controlling the breath, which is the source of our vital life force. Breath is also the one part of a stress response that can be consciously altered (McGonigal 2009). Health professionals can use breathing techniques with clients to decrease stress, manage blood pressure, improve aerobic capacity, and calm the mind and spirit (St. John & Puleo 2017).

Effective breathing is key to performance in any sport, whether it's lifting weights, cardiovascular training or skill-based therapeutic movement. The better a client's oxygen exchange, the more efficient that client will be. Breath also directs energy through the body, potentially influencing our emotional state; it affects the nervous system, increasing anxiety or creating a greater sense of calm.

The diaphragm is the primary muscle of respiration (Santos-Longhurst 2018). It forms a dome that attaches to the inside of the rib cage, the spine and the xiphoid process. Respiratory muscles include (but are not limited to) the internal intercostals, scalene muscles, serratus posterior inferior and superior, transversus abdominis, and sternocleidomastoids (Russian 2015). The muscles connected with breathing are an integral part of optimal core functioning, which in turn is linked to injury prevention.

Ai Chi uses many breathing techniques to facilitate movement, build strength, increase mobility and improve capacity. Linking breath to movement allows for enhanced mobility or stability. Generally, inhalation facilitates spinal extension, and exhalation facilitates spinal flexion. Either inhalation or exhalation can facilitate rotation. Exhaling during a challenging exercise helps to activate the trunk stabilizers and "brace" the torso (St. John & Puleo 2017).

Deep breathing techniques practiced in Ai Chi prepare the deep core muscles of the transversus abdominis, multifidus and pelvic floor to function well, taking the focus away from outer core work (i.e., the rectus abdominis and oblique muscles) (Long 2008). Tightness in the abdominal wall can limit a client's ability to breathe deeply. When expansion of the lower lung space is restricted, we tend to compensate with shallow breathing into the upper lungs. In this situation, muscles that lift the rib cage and expand the space between the upper ribs overwork during inhalation. Those muscles include the sternocleidomastoids (on the front of the neck) and the

upper trapezius muscles (on the back of the neck). Overwork makes these tight postural muscles tighter still, leading to a greater imbalance with the phasic muscles.

With practice, you can help clients find a balance in their core muscles that will allow them to relax as the diaphragm contracts during inhalation yet keeps them strong enough to support the lower back and assist in exhalation.

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