Bringing Viniyoga to the Aquatic Environment: Exploring Directional Flow of Inhale & Exhale

By Sandi Tindal

Viniyoga has within its teachings a breath-centric approach to yoga postures practice that stands in contrast to methods that have an emphasis on first detailing the particular arrangement of a pose with breath serving in a follow-up capacity. Bringing the Viniyoga method to the aquatic environment interestingly reinforces the principles of breath and movement the tradition recommends. On the surface, the "chest-to-belly" directional flow for inhalation proposed by Viniyoga for posture work comes across as utterly conflicting and bizarre especially when the idea of belly breathing has become so pervasively associated as the way to engage in "yogic breathing" or breathing well and deeply. However, upon a deeper dive and exploration of Vinyoga's breath work ideas, learning how to link breath and movement the Viniyoga way actually creates for someone the ability to gain better control over the various muscles associated with respiration and provides a pathway to improve lung capacity - cultivating the capacity to breathe well and breathe deeply takes on a whole new meaning. Practicing the proposed breath work ideas in the water can bring the practice to another level, as the properties of water create a very rich environment for discovery and understanding.

What does Viniyoga recommend for directional flow of inhale and exhale when engaging in its breath-centric movement postures practices? T.K.V. Desikachar explains that "The technique for gaining a fuller breath consists of consciously expanding the chest and abdomen on inhalation and consciously contracting the abdomen on exhalation." He further details that "Because we are interested in breathing that assists the movements of the body and does not hinder the extension of the spine, this chest-to-abdomen breath is best to use". [1] Let's examine and consider some nuances in how to engage with these ideas. While moving towards a posture, a practitioner can draw their navel back to their spine by contracting abdominal musculature progressively through the entire length of their exhale. With this set up, the central tendon of the diaphragm is stabilized. What can happen then as their inhalation is linked with an associated movement into a posture? The rib bones can then move expansively during the following inhale as their diaphragm contracts concurrently with activation of external intercostals and release of internal intercostals.[2] This has been referred to simply by some as "chest-to-belly" inhale and it's worthwhile to consider this as a method of breathing where the diaphragm is moving well and fully along with other associated muscles of respiration to help produce a particular structural effect. As the rib cage moves in an outward and upward direction, the thoracic vertebral bodies can position in less of a kyphotic curve. Viniyoga movement pairings with inhalation often encourage the connection of inhale linked to reduction of upper back curvature and working of erector spinae; movement pairings with exhalation link to

[1] The Heart of Yoga by T.K.V. Desikachar, pp. 21-22: The section titled "Fullness of Breath" has Desikachar's reasoning for "chest-to-belly" breathing practices.

[2] Yoga Anatomy by Leslie Kaminoff, pp. 9-11: Kaminoff provides a detailed explanation of the diaphragm's movement in breathing and clarification on the different movement and structural effects between central tendon stabilization versus rib cage stabilization.

stabilization of the lumbo-pelvic relationship. Through moving in the water and linking certain shape changes with inhalation, buoyancy can further enhance the experience of rib cage lift along with thoracic curve reduction. Furthermore, hydrostatic pressure in the aquatic environment causes the muscles of inspiration to work more so than they would in a land practice whereas the muscles of exhalation are facilitated. Creating pairings of breath and movement that work against buoyancy can provide a way to improve the ability to control and coordinate musculature associated with decreasing thoracic volume and those associated with increasing thoracic volume.[3] Finally, movement pairings with inhale and exhale can be designed to help appropriately release tension in muscles that often block pathways to freer and fuller breathing.

What are some adaptations of Viniyoga postures practice for the pool? At the basis of the breath and movement practice is a default torso shape breathing pattern while moving into and out of asana (postures). Put in simple practice language it involves: inhale linked to deliberately expanding the chest and exhale linked to intentionally contracting the abdomen. This directional flow pattern matched with particular movements can provide an opportunity for the practitioner to experience the adjustment of the thoracic portion of the spine towards extension or axial extension during inhalation while the lumbar region can stabilize with the pelvic girdle during exhalation. Let's take a look at two different breath-centric posture movements adapted to the pool environment.

Symmetrical Forward Fold: Child's Pose and Plank Pairing With Breath

This movement pairing with breath involves the practitioner having a place for their hands to hold the side of the pool. This can involve the use of a pool ledge that is comfortable to grasp or a pool therapy bar. The practitioner can create a plank position by arranging their arms shoulder width with hands holding the side of the pool and walking their feet back until the heels lift but the balls of the feet remain in contact with the bottom of the pool (Figure A). As the exhale phase of the breath begins, the practitioner connects their attention to their low belly and progressively contracts their abdomen while simultaneously moving into a knees to chest position; they can draw their body towards the pool wall by bending their elbows. Then as the inhale phase of the breath begins, they connect their attention to the movement of their rib cage towards expansion while simultaneously moving back to the plank position.

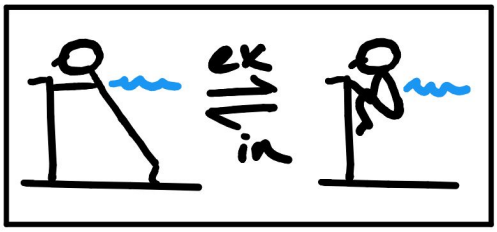

Figure A: Plank and Child's Pose Pairing With Breath (in - inhale, ex - exhale)

[3] The accessory muscles of respiration that participate in increasing and decreasing thoracic volume can be seen in Yoga Anatomy by L. Kaminoff, pp. 10 - 13, section titled "Accessory Muscles of Respiration".

Some practitioners exploring this breath and movement pairing find that the insertion of a pool noodle between their legs provides sensory feedback that increases their focus and improves their ability to not release the abdominal wall musculature as quickly when the actions of inhalation begin (Figure B). The addition of the pool noodle's buoyancy may also help lengthen the buoyant time the practitioner needs to create the link of expanding their rib cage with inhalation. While both versions provide an opportunity for back muscles to release (especially the low back region) with exhalation, the version with the pool noodle often facilitates the experience.

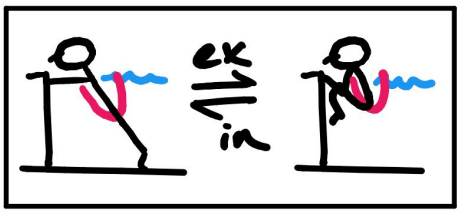

Figure B: Plank and Child's Pose Pairing with Breath and Pool Noodle (in - inhale, ex - exhale)

The Viniyoga method to asana (postures) practice usually involves repetition into and out of a pair of poses with the movement of the breath; during each entry and exit of the poses the practitioner has the opportunity to gain insight into their personal movement patterns. The aquatic environment provides the added bonus of decreasing stress on joints during the exploration and the experience of buoyancy interestingly provides an element of persuasion to the concept of inhalation linked to fully expanding the chest. The movement of the rib bones outward and upward through inhalation - though challenged some by hydrostatic pressure - creates a noticeable upper torso buoyancy to the experience of the practice in the water.

Asymmetrical Standing Backbend: Warrior 1 Adaptation Pairing with Breath

The use of the pool wall for placing the heel of the back foot against can be very helpful to construct a stable asymmetrical standing position (Figure C). The practitioner begins with their feet hips width and lengthened apart front to back. Hands can be placed on the sternum with the chin slightly down. Through the inhalation, as the arms sweep out wide, the upper back can flatten (reduction of the thoracic curve) while the shoulder girdle displaces forward of the pelvic girdle and the front knee bends to accommodate the center of gravity shifting forward. Through exhalation, the link with the abdominal wall contraction provides a reinforcement of stability for the lumbar spine and pelvis as the practitioner returns to the starting position.

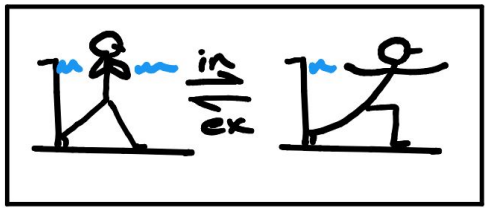

Figure C: Warrior 1 Pairing with Breath (in - inhale, ex - exhale)

For someone who tends to completely release their abdominal wall contraction with the start of their inhalation, their low back curvature may increase excessively as the movement to the warrior stance progresses. Furthermore, a lack of stability may emerge and be more readily experienced by the practitioner in the aquatic environment during practice of this standing posture if they often associate inhalation to protruding their belly. For learning control of their respiratory and abdominal muscles, the practitioner can instead work on directing their attention to fully expand their chest while not releasing too quickly their abdominal wall contraction established from exhale.

Another way to practice control and coordination of the abdominal musculature with the other muscles of respiration involves staying in the warrior stance through the exhalation and then with each following inhalation, elevate the arms out wide and up in stages (Figure D shows a two-stage approach). Creating space for each inhalation so that it does not disrupt the base of support requires not just recruitment of large muscle groups for standing stability but also involves learning how to coordinate and manage all the muscles associated with respiration. For someone whose rib cage depressors[4] tend to over work, we can consider how this movement and posture change linked with inhalation could help free them of that patterning.

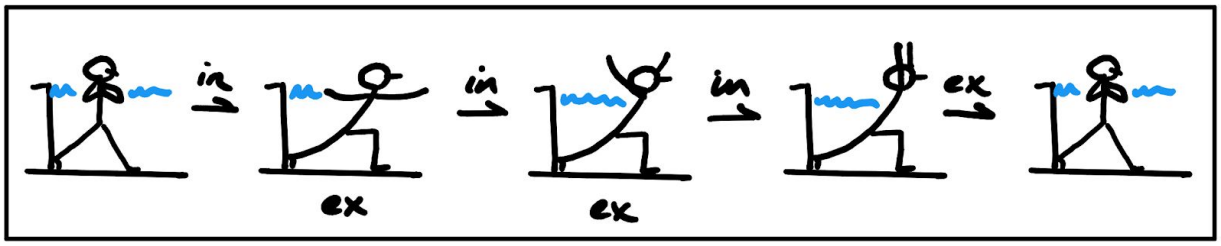

Figure D: Warrior 1 Pairing With Breath, Two-Stage Lift of Arms (in - inhale, ex - exhale)

Fully Engaging With The Breath With the Help of Water's Properties

Viniyoga's "chest-to-belly" inhale and "belly firm" exhale is a breathing approach to postures practice that fully engages the attention of the practitioner in the aquatic environment as they work to simultaneously stabilize, mobilize and breathe. Through this method one can even discover more readily a relationship between the movement of their spine and the movement of their breath. By immersing the practice techniques in water, a practitioner's lung capacity can be further developed. Buoyancy and hydrostatic pressure in the practice environment offer an opportunity for a practitioner to grow in their skills of respiratory muscle control and coordination. Being able to master and orchestrate the movement of the various muscles associated with respiration can provide for someone more choices in how to breathe well. They can potentially through a consistent Viniyoga breath-centric practice in the water be more acquainted with their personal breathing mechanics. With these insights then can then engage with a variety of ways to breathe supportively for whatever arises when back on land.

[4] Rib cage depressors could also be identified as the muscles that pull the rib cage downward or reduce thoracic volume. See Kaminoff's Yoga Anatomy, section titled "Accessory Muscles of Respiration".

Sandi Tindal is a certified Viniyoga teacher trained through the American Viniyoga Institute and has also studied with Camella Nair of Aqua Kriya Yoga. Sandi has been applying Viniyoga principles of breath and movement to the aqua yoga classes she teaches in the Dallas area year round at an indoor warm salt water pool. She also works with students privately who have conditions that make an aqua yoga practice a preferred option over a land yoga practice. She has created an aquatic yoga training program that illuminates the idea of directional flow with breath and the relationship between breath and the spine. To learn more, visit www.dallasaquayoga.com


These photos show Sandi assisting a student who has arthritis and rods from a scoliosis correction surgery.

References:

Desikachar, T. K. V. (1999) The Heart of Yoga: Developing a Personal Practice (revised edition). Inner Traditions.

Kaminoff, L. & Matthews, A. (2007) Yoga Anatomy (first edition). Human Kinetics.