

Chapter Two “Would you like a kick board with that?”

Kick Boards Distort Posture and Impede Biomechanical Advantage.

The use of Kick Boards in Learn to Swim was discussed in ‘Chapter One’ as were a few ideas for ‘weaning’ swim teachers off kick boards. It is now time to ‘take the plunge’ and realize that any floatation device in the out stretched hand of a swimmer not only plays into the hands of the primitive brain, but **inhibits the critical skill of aquatic balance.**

Balancing Opportunities

In order to balance in the water it is essential that a ‘tall’ posture is developed the core of the body is ‘engaged’ (tone not tension) and the top end of the lungs are pressed into the water in order to help to lever the hips and legs to the surface.

With a floatation device held in the hand extended above the head, any pressure on this tool by the swimmer’s hand actively levers the lungs up to the surface negating any levering of the legs. This increases the angle of the body in the water resulting in increased resistance.

Alternatively the swimmer might use the body correctly and press the lungs into the water, but this generally results in a bent elbow and the learner holding the floatation device above the water, Unfortunately, there are a two further negative possibilities. Either the shoulder joint is put into a position of impingement as it jams against the ear resulting eventually in pain in the joint, or secondly, the spine ‘gives’ at the waist or neck to reduce pressure in the shoulder, this distorts the posture and increases resistance.

Why we must pay attention to core stability and balance

Human brain development texts detailing the location of touch or somatosensory regions in the brain describe ‘mind maps’ which, far from accurately mimicking the surface of the body; are strikingly distorted. The more sensitive regions of the body such as lips mouth, face and hands take up a disproportionate share of cortical space, whereas large parts of the body such as the trunk and legs cover comparatively little cortical ground. (1) With the hands, feet and mouth taking up over 70% of sensory feedback to the brain, we human beings are severely handicapped in sensory awareness of the core of our body. Any stimulus in the hand such as holding a floating device only increases this bias and again hinders our ability to learn control in the core and ultimately balance in the water. Conscious attention must be paid to improve our awareness and control of our body core. When this occurs repeatedly over time the mind map for that particular area of the body literally ‘grows’ in the brain, and we become physically more intelligent in the use of our core.

Giving a kick board (or any floating device) to a learner swimmer is akin to giving balancing poles to a learner skier to hold in their hands to press on to the snow should

they feel off balance. In this scenario, the posture and balance they will learn during the learning process would have no relation to what is required in the real experience of skiing the slopes. This is also true of learning to swim with balancing tools in the hands, as without the skill of core body balance the arms and legs will not be able to be used for maximum effect in propulsion. When swim teachers report “they (the swimmer) really need the float to practice A, B or C”, what they are really saying is “I’d like to skip a couple of stages to make it look like they are ready to learn A, B, or C”.

The consequences of loss of balance

Because losing your balance as a swimmer in the pool does not have the same consequences as losing your balance as a skier on the learner slopes of the mountain, it has almost become accepted that balance when learning to swim is not ‘critical’, and therefore the focus is often directed elsewhere. As the ‘landing’ from a ‘fall’ in the water is always a soft one, the learners could be forgiven for not paying attention to this area, swim teachers, however, can not. Balance is of utmost importance if you are interested in efficiency and ultimately velocity.

If not taught during the learning process, balance can be even more difficult to acquire and ‘tune into’ at later stages of skill development. Increasing repetitions with focus on the arms and legs only serves to sharpen the senses in the extremities and make the **core body awareness** of the swimmer even more retarded. If balance in the water is coordinated solely from the core of the body this frees up the arms and legs to be used solely for propulsion. If, however, this critical skill of aquatic balance requires an element of adjustment from the hands or feet, the long term potential for efficiency, effectiveness and ultimate velocity potential for the swimmer can never be realised.

How we teach is crucial

Mechanical advantage within the ‘arm strides’ of any swimming stroke can only be maximized if the arm is at an advantageous angle to the body and, the sensory intelligence of the swimmers body is tuned finely enough, to make the most of the swimmer’s body position. In other words, a swimmer could be in a perfect position in the water and only feel the connection of the arm on the water but not the connection of the lower abdominals to the arm which in turn feels traction in the water. If swim teachers are encouraged to use ‘awareness questions’ rather than ‘position instruction’ to facilitate learning these connections would more readily be learned. For example “Can you feel your tummy working to keep you ‘long and straight’ as you slide your long body past your hands?” Rather than “Put your hand in the water out in front and pull, with your fingers pointing towards the bottom of the pool”

Chapter Three

Kick Boards Stress the Shoulder Joint Outside of a Functional Plane

Kicking or swimming with the hands holding a kick board out in front is the equivalent of holding the arms straight above the head holding a moving bar when learning to ice skate.

Why do we use kick boards in the hands of young learners?

If the reason for the kick board in the hand is to assist with balance, would it not be better to position the floatation device around the belly button? This would provide mechanical advantage in the shoulder joint, and then focus on the body core would allow correct posture and 'lean' to be achieved. Asking anyone, (let alone a small child) to balance themselves using their hands held vertically above their head not only puts them at a mechanical disadvantage, but any pressure on the hand with the shoulder in this position could easily create pain in the shoulder.

If the reason for kick boards being held out in front in the hand is because 'we have always done it this way and we've had plenty of success', you might want to have a discussion about how you are measuring 'success' and is the critical skill of balance in the body core part of those measures? Have you thought about what would be the BEST way and not just what we think is 'working' at the moment.

If the reason is the 'kick board shows the learner where to put their hand in the water' ... it doesn't. This would be akin to holding a stick out in front to show you where to place your feet when you walk! This would not only reduce the smooth, and potentially athletic walking action, but focus attention on something which is a very natural movement. The arms in freestyle work best if they are used like the legs are used when being athletic on land in walking and running. The child does not think about, nor 'place' their feet in the 'right' place on the ground, the leg simply swings from the centre of the body and where it lands is where the child gets traction to travel their body past. In the same way the best swimmers in the world swing their arms **into** the water (not **onto** the surface) where they can immediately get traction and mechanical advantage as their hand is relatively deep in the water, and the body rotation to the side, gives maximum mechanical advantage for athletic movement of the body past the hand.

Try explaining the concept of holding on to the water and sliding your body by, to the small children in your class. You will be talking about 'feelings' not 'doings' and you will notice your learners become smoother in their movements, and generally move with less effort. It is only once the body can relax and move free of tension that athletic capacity can be met.

To the kick board manufacturers ... I am not suggesting that kick boards should not be used at all ... far from it, only that they should not be used held out above the head in the hands of swimmers. Many body postural drills are explained by Bill Boomer in his series of videos on Aquatic Posture, Line, and Balance and many use a kick board under the body on both back and front. These drills not only increase attention to the core but also increase awareness and control of the core. Several kick boards on top of each other can make these exercises more demanding as the core muscles have to work harder to maintain balance.

As mentioned in Chapter One the original inspiration for my continued thoughts in this area are the result of hearing Bill Boomer talk at the World Coaches Conference in 1996. Since then I have been privileged to spend many weeks in his company and that of evolutionary coaching expert Milton Nelms who continually inspires me to deepen my thoughts on the future possibilities for human movement in water. My applications to learn to swim would not be possible without their generosity in the sharing of thoughts on swimming velocity.

Good luck with the re-positioning of your kick boards! I'd like to hear from you if you are trying out any of these ideas and how you are going

Best Regards

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(1) Lise Elliot, PhD 1999 *Whats going on in there*. Bantam Books New York. pg 126