



SEVEN SECOND RULE & LESSON LENGTH

The Seven Second Rule

Learning swimming behaviors requires submersion, therefore requiring the student to be without air for a period of time. It is important to note that submersion during a Swim Safe Now lesson should never be associated with a struggle for air. This practice is not only physiologically dangerous, but it also contradicts the principles of behavioral learning.

The 7 Second Rule is approximately 1/3 of the time period that defines apnea (or cessation of breathing) by the American Academy of Pediatrics. No student is to go longer than 7 seconds without a breath. The 7 Second Rule is always in effect, even when a child is not submerged. Instructors will make sure that adequate respiration is taking place at all times.

With repeated face down submersions and the breath holding that it requires, a young child can experience respiratory acidosis faster than an adult. Under the stress of a slightly reduced oxygen level, some peri-oral cyanosis can be observed in young students and may be the first, albeit too late signal of the physiological processes leading to shallow water blackout and the real potential for drowning. An additional safety consideration involves the swallowed air while gulping a breath when surfacing from a prolonged submersion. Air passes into the stomach and signaling the brain to shift blood volume to the digestive organs to begin "digesting" the air. This creates pressure on the vagus nerve, leading to changes in consciousness, muscle fatigue, abdominal distention and poor respiration.

Frequent breaks in the lesson to burp and manage abdominal distention and check for fatigue through VC checks also allow the student to rest and resume normal respirations. These should occur every 1-2 minutes throughout the lessons.

A student who is repeatedly exposed to submersion intervals longer than seven seconds may become used to the discomfort experienced in prolonged breath holding. The student will then be shaped into waiting for this discomfort prior to making attempts at relieving it. By doing this, the desperate need for air becomes the only stimulus to which the student is responding and the period to establish and adjust a solid float necessary for respiratory recovery is lost.

At 6+ seconds the need for air is so great, the strength of the air/opportunity to breathe is so strong, that whatever behavior occurs just prior to the opportunity to breathe will likely be repeated, good or bad. So by allowing or waiting 7 seconds to "see if the student figures it out", is more testing than teaching, and not shaping the desired behavior of rolling back within 3-4 seconds.

It is important to use a 3-4 second rule for teaching and shaping the rollback to float. In other words if the student does not exhibit an approximation of the target behavior in 3 seconds, reinforce the best approximation you have now and change the approach or use a different prompt or procedure that might work better.

The 10-15 Minute Lesson

Sensorimotor learning works best when the learner is exposed to as much of the material as possible within each session, a concept known as massed practice. Skills such as ice skating, bicycle riding, typing, knitting and swimming fit this category because they require muscular movements and sensory feedback from the environment about those movements and therefore they are skills that aren't "forgotten". To be effective, the amount of material presented and the order in which it is presented must be weighed against the fatigue level of the student. Once the fatigue level is reached, the muscles are no longer able to respond, learning stops, and retention of the skill is unlikely.

Even given the unique characteristics of each child we serve, these conditions are best met when the lesson is less than 15 minutes in length, with presentations 4 days per week. No lesson should surpass 15 minutes in length due to the likelihood of physical fatigue, which can be dangerous physically and does not honor the principles of sensorimotor learning. The average lesson time for an infant is 6-8 minutes and for older children, 8-12 minutes before the onset of fatigue.

No more than one lesson per day is allowed.