## Breath Holding, It's All Fun and Games Until... What You Never Knew About Shallow Water Blackout

- On Wednesday, September 17, 2014, at a YMCA pool, a 24-year-old man blacked out after repeatedly holding his breath underwater for long periods of time. A lifeguard recovered him from the pool, but the man never regained consciousness. He died in the hospital the following day.
- On Saturday, December 26, 2015, at a YMCA pool, a 21-year-old man blacked out after holding his breath for an extended period of time while swimming laps. A lifeguard and bystanders recovered him from the pool, but the man never regained consciousness. He was pronounced dead on the pool deck.
- On Sunday, March 20, 2016, at a YMCA pool, a 43-year-old man blacked out after repeatedly holding his breath underwater for long periods of time. A lifeguard recovered him from the pool, but the man never regained consciousness. He was pronounced dead that evening.

Many of our residents (frequently children) enjoy seemingly innocent games of holding their breath underwater. These are normally done either to play/swim underwater or to compete against one another to see who can hold their breach the longest. Whether playing with friends or challenging themselves, people young and old take on the challenge. While this age old pastime may seem perfectly harmless, it can easily turn into a deadly game. The problem is that swimmers take several deep breaths quickly in succession and forcefully exhale to try to extend the amount of time their breath can be held. This may result in hyperventilation. This is an extremely dangerous practice that can easily lead to shallow water blackout, or the unexpected passing out of someone underwater because there isn't enough oxygen in the blood. Hyperventilation and breath holding trick the body into thinking that it has more oxygen than it does and anyone can blackout. Most blackout victims have no prior medical conditions, they are physically fit, and there is no warning. Swimmers will not struggle to reach the surface; they will simply go unconscious. For these reasons, our guards are trained to put a stop to these games by whistle blowing and speaking to those partaking in this type of activity.

Shallow Water Blackout, also known as Hypoxic Blackout, is killing swimmers all over the country. At least 5 swimmers have died since 2008. At least 18 more have been successfully rescued after losing consciousness following extended breath holding—incidents which could easily have ended in a fatal result had they not been identified in time. During this same amount of time, 5 children who could not swim died from drowning in YMCA pools—the equal number of deaths seen from Shallow Water Blackout.

For more than a decade the aquatic safety community has been highlighting the dangers of Shallow Water Blackout. Broadlands Association and High Sierra Pools have banned this practice in our swimming pools.

It is important to note that USA Swimming, the largest competitive swimming organization in the world with more than 360,000 participants now bans hypoxic training for competitive swimmers. So does the American Red Cross and the YMCA. The reason why many people are unaware of this particular problem is that when someone dies of Shallow Water Blackout the Coroner simply states "drowning" as the real cause and the problem is swept under the rug. Genetic Drowning Triggers like Long Q-T, RyR2, and seizure disorders are all precipitated by prolonged breath-holding that is competitive and repetitive. As Dr. A.J. Craig stated more than 50 years ago after having watched his Princeton Swim Team Co-captain kill himself, "One breath, One Time; One Length, One Time."

- Never swim alone. Even when lifeguards are present, swim with a buddy.
- Do not attempt long underwater swims or timed breath holding.
- No breath holding competitions, either for time or distance.
- Never hyperventilate prior to swimming.
- Don't resist the urge to breathe: always come up for air when your body tells you to.