

Seizures at the Pool – What Do We Do ?

Seizures may occur in any setting, which of course includes the swimming pool. The human brain has more than 10 billion neurons and boasts greater than 10^{14} Synaptic connections. There are ion (charged electrolyte molecules) channels that impact the highly organized nerve fiber (neuron) networks. A seizure can occur when there are acute changes in the amount of excitatory neurotransmitters or changes with the effect of inhibitory neurotransmitters in the brain. Seizures may be generalized, effecting the entire body (grand mal seizures) or focal (partial).

Major signs / symptoms of seizures include loss of consciousness, slow or fast breathing, lower or faster pulse, and lower oxygen saturations. Vomiting may occur as the patient loses consciousness. The individual may urinate or defecate without any control. She / he may exhibit spasms of the arms and/or the legs, and lose the ability to speak. The arms and legs may become very stiff after the seizure. Factors at the swimming pool that may trigger seizures include higher carbon dioxide levels in the blood (due to prolonged immersion under water), low blood oxygen levels (See with asthma, bronchitis, flu), sudden changes in temperature (immersion in cold water) and electrolyte changes (changes in sodium and potassium) that occur during dehydration (hot Summer days) and /or with prolonged spells of vomiting and diarrhea.

If you see a child or adult with seizures, you should yell for “HELP” and insist that the rescue squad (“ 911”) be called. Stay with the person. If they are breathing okay, then no immediate actions are required. If the individual loses consciousness, but is still breathing, then turn the victim on her /his side and Monitor the breathing. If possible, place a swimming towel under the neck to keep the airway open. If the child is actually seizing with uncontrollable Arm and leg movements, pad the area next to the arms and legs with a swim towel, coat or any other soft garment. Occasionally the child may bite forcibly on the tongue. In this case, the insertion of a stiff object (metal spoon, tongue applicator), may keep the teeth from biting into the tongue. After any seizure the individual may be very tired. They should not be permitted to swim any more events for that session, due to the risk of drowning if the person loses consciousness during the

swim. Let the lifeguards take over as soon as possible, and they should stay with the patient until rescue help arrives. Let the parent(S) or coaches know of the event, if they are not already there. Most likely they have seen the seizures before in this child and will be a reassuring face when the child wakes up.

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