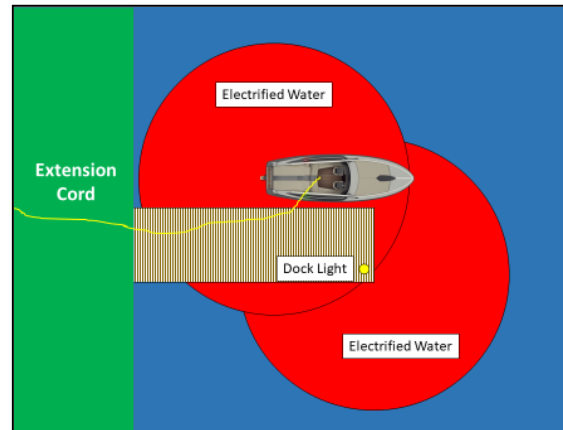


Electric Shock Drowning

By: Mike Berry

Electric Shock Drowning (ESD) has been in the news over the years and comes to our attention after someone drowns after coming into contact with electrified water. This can be caused by faulty wiring, electrical cords, improper grounding, or other electrical issues around a dock, swimming pool or boat that causes the water to become energized from electricity leakage. Unfortunately, these occurrences slowly fade from our attention until it happens again.

Just recently a 9 year old little girl drowned after being electrocuted in her father's swimming pool. The water was electrified by a wire attached to an underwater pool light. Another case involved a teenage girl who drowned after a dock ladder was lowered into the water so she could climb out. Water had made its way into the dock's light switch box and electrical current traveled through the dock, down the ladder and into the water. And another case involved a little girl who was swimming around a dock and reached up and grabbed the boat lift which was improperly grounding and was electrocuted. Every year it seems there are a few more deaths related to electrified water and Electric Shock Drowning.



Electrified water is not only a danger to swimmers, but also to divers who respond to drownings near or around docks and boats that have access to electrical current, or when divers conduct training dives or other operations near these areas. Just think about all the privately owned as well as commercial piers and docks in your area that have

electrical outlets, lights, boatlifts and even electrical cords running to them. Even boats that have electrical power can be a concern. All have the potential of creating a very dangerous hazard for divers if we are not aware of the threat.

So what is Electric Shock Drowning?

Basically, it's when a person drowns after coming into contact with water that has been electrified by an electrical current. The person becomes a conductor of the electricity which in turn causes the muscles to lock up causing the swimmer to drown or can even cause ventricular fibrillation (when the heart beats with rapid, erratic electrical impulses) or electrical shock death.



As public safety divers, it's imperative that we understand the danger of electrified water and Electric Shock Drowning when searching in these areas or when responding to a drowning event that occurs around a dock, pool, boat or other location which has electric current. Before entering the water, the potential of electrical shock in these types of environments must be added to our scene evaluations. All such areas should be thoroughly examined, tested and even possibly "locked out" which involves turning off the electrical current on shore leading to the water environment and even conducting a lockout/tagout procedure so the electrical source cannot be accidentally turned back on while divers are in the water.



So, what are some things we can do as Public Safety Divers?

- ALWAYS consider the possibility of electrified water when around docks, boats, swimming pools and piers when they are connected to or have access to electrical power.
- When responding to a drowning around these areas, consider the possibility of an Electric Shock Drowning (ESD).
- If possible, turn off any electrical power source that controls the electricity going to these areas before getting into the water.
- If possible, test the waters for electrical current before going in by using a test meter, Shock Alarm™, Shock Alert™ or other such device.



Shock Alarm™



Shock Alert™

- Incorporate a lockout/tagout procedure when diving in these areas.
- When diving or swimming, if you feel a tingling sensation, swim away from the dock, pier, boat, (energy source) and report the situation.
- In cases where swimmers report tingling or electrical current, provide buoyancy to help them stay afloat and have them swim away from the possible power source.
- Do not send divers or swimmers into the water until the power source has been de-energized.
- Unplug any boats from their power source if you will be diving near them.
- Make sure the marina or owner of the dock/pier know diving operations are being conducted and locate any power sources that might be of concern.

The Electric Shock Drowning Prevention Association (ESDPA) strongly encourages NO SWIMMING around docks using electrical power. It recommends not swimming within 150 feet of such docks and is mainly concerned with recreational swimming.

References

<https://www.electricshockdrowning.org/>

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