

## Electrical Shock Drowning: Know the Dangers of Swimming near Docks, Boats

**WOULD YOU USE** a plugged in electrical appliance while taking a bath? Of course not. Yet we don't think twice about jumping into a lake near boats and docks—both charged with electrical power.

Perhaps our indifference stems from childhood and the sweet relief experienced by taking a dip in the lake or pond never thinking twice about potential dangers, other than the mysterious monster fish our siblings swore lurked inches away.

With an increasing number of docks carrying electrical power to accommodate boat lifts, lights and shore-power connections, electrical shock drowning (ESD) is in the news. It is the result of typically low-level alternating currents (AC currents) passing through the body causing the victim's muscles to become paralyzed by the electrical current. He or she is unable to swim, and may ultimately drown. Higher levels of AC current in the water will also result in electrocution.

The typical victim is a child swimming in or around a marina or dock where electricity is present. The electricity that enters the water and causes ESD originates from the wiring of the dock or marina, or from boats connected to the marina's or dock's power supply.

ESD is a silent killer. There is no visible warning or way to tell if water surrounding a boat, marina or dock is energized or will become energized in seconds with fatal levels of electricity.

Most often, electricity enters the water when an electrical fault occurs aboard a boat. Typically, the electric fault is intermittent. For example, the fault that places deadly current into the water may only occur when a light switch is turned on, or when another electrical device cycles on. Water can appear and feel "safe" and in a split second become energized with deadly electricity.

### Preventing Electrical Shock Drowning

- ▶ NEVER swim in or near marinas, docks or boatyards.
- ▶ Tell others about ESD. Most have never heard of ESD and are unaware of the danger.
- ▶ If you are a boat owner, have your boat inspected by an electrician with current American Boat and Yacht Council Electrical Certification (ABYC) or by an ABYC-Certified

Technician. Boats with AC systems should have isolation transformers or equipment leakage circuit interrupter (ELCI) protection, comply with ABYC standards, and should be serviced by an ABYC-Certified® Technician.

- ▶ Talk to marina operators about the danger of electric shock drowning. Ask them to install GFCI's on all shore power pedestals and on all marina wiring circuits. Ask if their marinas are regularly inspected by qualified electricians familiar with National Fire Protection Association Codes: NFPA 303 and NFPA 70.

### If You Witness an ESD

- ▶ Unplug a boat's shore power or shut off the closest circuit breaker and call 911.
- ▶ Toss something buoyant, such as a Type IV throwable float or a life jacket toward the person in the water.
- ▶ Extend a PVC-handled boat hook or wooden (non-conductive) oar to try to reach the victim and guide them AWAY from the boat or dock.

The ideal rescue would be to paddle out in a non-metal-hull boat and pull the person away from the current, then try to haul him or her aboard. If the person can swim, suggest getting as far away from the dock as possible to avoid the electrical current. **KCL**

Information provided by Electrical Shock Drowning Prevention Association.

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