Three Sheets
NORTHWEST

## Rescue, Recovery and Re-warm – the Maritime 3 Rs

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In the cold waters of the Northwest, the shock of falling into frigid waters can be more lethal than hypothermia.

When we were kids, it was all about readin', ritin' and 'rithmatic. On the sea, especially in cold water environments, it is all about rescue, recovery and re-warming. I don't expect that there are currently many boaters out there on our bays, lakes and coastal waters. But some are out there, and it's important that they know what to do if they or a crew member falls into the water.

### He Fell In and Can't Get Out — Rescue

When I've lectured about hypothermia, I often suggest that students conduct a little experiment with the kids (or yourself!) to demonstrate the power of water to draw heat out of you — 25 times faster than air of the same temperature. To prove it, try this experiment with the kids: get a glass of water to room temperature and drop an ice cube in it; at the same time, lay an ice cube on a napkin next to the glass of water.

When the ice cube in the glass has melted away, there will still only be a small amount of dampness around the ice cube sitting on the napkin. But, upon further research conducted by cold water specialists in Canada (where the water is cold all the time, when it isn't frozen), exertion — such as thrashing or swimming — can increase that heat-stealing mechanism up to

10 times; that's 250 times now!

So, if someone falls in, it is critical to get them out ASAP.

**When Rescue Become Recovery**

By U.S. Coast Guard standards, a rescue becomes a recovery when the victim has died from the circumstances. So, if someone just falls in, it is still a rescue, right? Well, hopefully, but there are circumstances when death can come almost unbelievably quickly. As pointed out here, cold water – sudden cold water – can be a killer long before hypothermia gets to you:

1. A splash of cold water in your face can cause you to involuntarily inhale water, which is a killer – not swallowing it down your throat into your stomach, but inhaling it into your lungs. This is the "gasp reflex."
2. In some people, the reaction doesn't get that far into their bodies. They hit the cold water and as soon as it touches the back of their throat, it closes up. The spasm stops the water from getting into the body, which is the biological intent, but it also stops air from getting to the lungs. The person bobs back to the surface (their lungs are full of air) and they suffocate in the open water, unable to breathe due to a blocked air passageway. This is what is now called "dry drowning." There is no water in the lungs, nor is there any oxygen. I've seen a BoatUS report that stated that 15-20 percent of all drowning are "dry drownings."
3. When the difference between your body temperature and the water temperature is greater than 30 degrees, the chance of a heart attack from the sudden immersion goes up dramatically.
4. Even something as simple as a racing heart from shock and fear can create hyperventilating on the part of the victim. Dizziness followed by unconsciousness results as the ratio of oxygen/carbon dioxide changes in the victim's blood system.

If you are the victim, remember this: an initial deep and sudden gasp followed by hyperventilation that can be as much as 600 to 1,000 percent greater than normal breathing. You must keep your airway clear or run the risk of drowning. Cold shock will pass in about one minute. During that time, concentrate on avoiding panic and getting control of your breathing. Wearing a lifejacket during this phase is critically important to keep you afloat and breathing.

**Okay — We Have Them In the Boat, Now What? Re-Warm!**

Believe it or not, if you apply heat directly to the arms and legs of a hypothermic person you just pulled from the sea, you can kill them. It is called the "after drop" — you force cold blood that has pooled in the arms and legs (constricted blood vessels) back toward the heart and brain and that lowers their body temperature.

Apply heat (hot water bottle, towels that have been microwaved; heating pads; your warm, dry hands) to the head, neck, chest and groin. Of course, you need to get them into a warm or at least dry environment as part of the rescue. Lie them on their back or side (not face down). This person is dying, so there is no time to be squeamish or bashful. Lie on top of them and wrap a blanket around you both.

There are two schools of thought on getting them out of the wet clothes. Some believe that the little bit of water than you can warm with your body can aid in their recovery. My own experiences lead me to believe that, if the alternative is wet clothes or just a blanket around a naked body, go with the wet clothes and cover them up with blankets and your warm body. If they are conscious, give them warm — not hot — liquids. Add sugar for energy. No alcohol and avoid caffeine if possible.

Bring 'em back alive, captain.

*This post is courtesy of **Capt. Vincent Pica**, chief of staff for the First District, Southern Region, United States Coast Guard Auxiliary.*

BTW, if you are interested in being part of USCG Forces, email me at JoinUSCGAux@aol.com or go direct to the D1SR Human Resources department, who are in charge of new members matters, at DSO-HR and we will help you "get in this thing…"