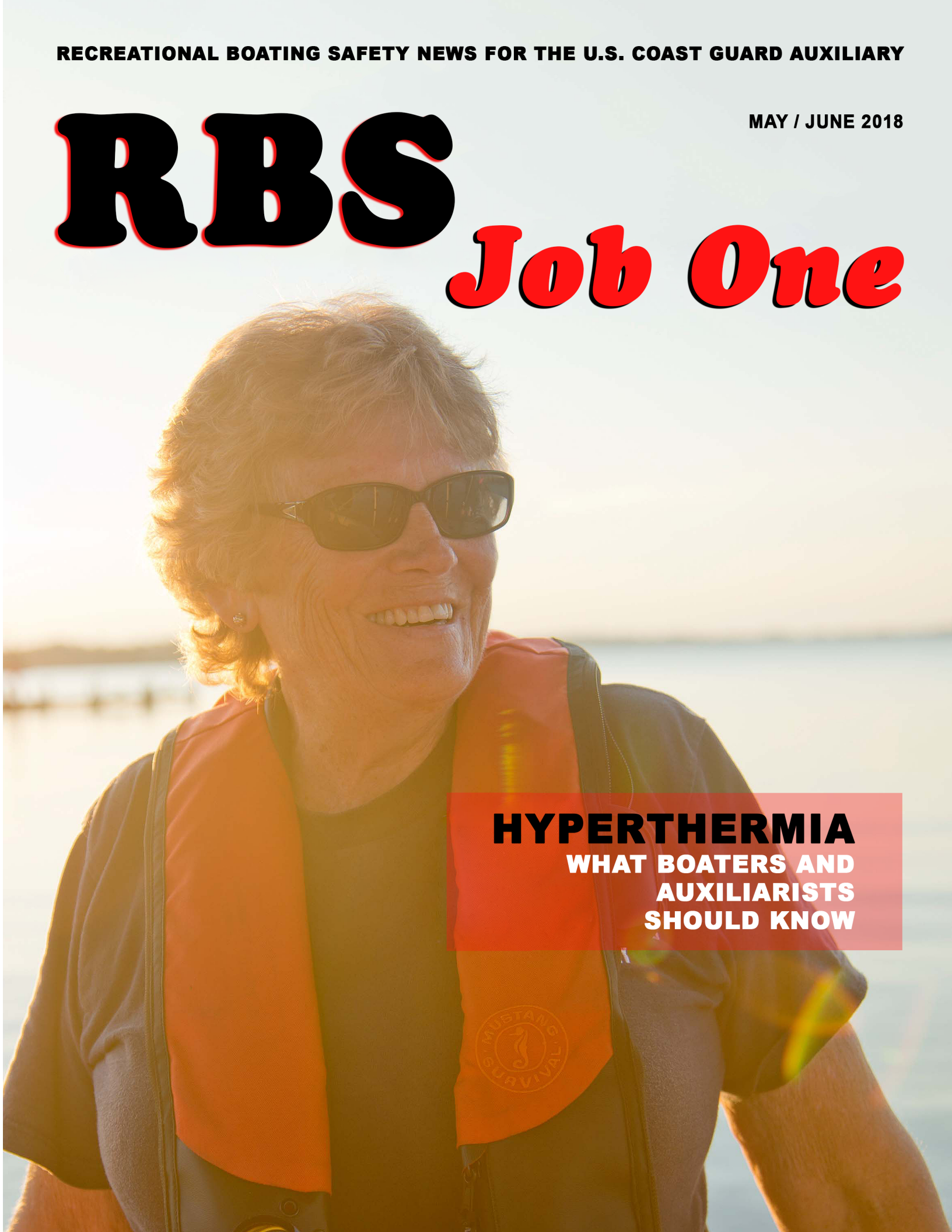
RECREATIONAL BOATING SAFETY NEWS FOR THE U.S. COAST GUARD AUXILIARY

RBS Job One

MAY / JUNE 2018



HYPERTHERMIA

WHAT BOATERS AND AUXILIARISTS SHOULD KNOW

RBS *Job One*

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Publication of the United States Coast Guard Auxiliary

Recreational Boating Safety Directorates

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HYPERTHERMIA: A CLEAR AND PRESENT DANGER

The first in a series on Hyperthermia Awareness While On Patrol

UPDATE ON FIRE EXTINGUISHER RECALL

ON THE COVER Jean McCormick gets underway for an evening of boating at Lake Anna, Virginia, Aug. 14, 2016. U.S. Coast Guard Auxiliary photo by Daniel Torok.

RBS Job One is the flagship publication for the U.S. Coast Guard Auxiliary RBS Directorates; RBS Outreach (B), Public Education (E) and Vessel Examination and Partner Visitation (V). Its purpose is to inform all members of the Auxiliary of current developments affecting their job performance in conducting the core mission assigned by the Coast Guard and to share best practices. Send submissions to sydneyhay@mindspring.com.

Distribution: All Cost Guard Auxiliarists with email addresses in AUXDATA, COMDT (CG-BSX) staff, CGAuxA executive director, and U.S. Power Squadrons, via direct email from director RBS Outreach (DIR-B).

Hyperthermia: A Clear and Present Danger

Hyperthermia Awareness While on Patrol

By Steven Henkind, MD

Because of a variety of factors, hyperthermia is a condition which may put auxiliarists at risk.

Twice, in the past several years, I have had to put on my doctor hat and treat casualties for hyperthermia. In both of these cases, we were out on patrol and happened upon a casualty who had clear signs and symptoms of hyperthermia. Since I am familiar with how to recognize hyperthermia, as well as how to treat it, I was able to prevent a serious situation from becoming even worse. The casualties were not individuals on other boats – they were, in fact, the very same Coast Guard auxiliarists with whom I was on patrol.

Hyperthermia is a common medical condition which is uncomfortable and debilitating. If left untreated, it can become fatal. Because of a variety of factors, it is also a condition for which many auxilarists are at risk. The good news is that hyperthermia can be prevented, is easy to recognize, and can be readily treated in the field --if it has not progressed too far. This article provides a description of hyperthermia, a summary of the contributing factors, techniques to prevent it, how to recognize it, and how to treat it.

The Spectrum of Hyperthermia

Although most of us learned, at some point, that 98.6°F is a normal temperature, there is, in fact, variability in the actual number with various sources listing different cutoff numbers for an above-normal temperature. Depending on the information source, this could be anywhere from 99.5°F to 100.9°F . Whatever the exact number is, the temperature for an individual will vary over the course of a day due to activity levels and other factors. If your "normal" temperature is 98.6°F, your measured temperature in the afternoon may be 99.9°F.

Deep within a portion of our brain called the hypothalamus is a thermostat. Just like the thermostat in your house, the hypothalamus has a "set point" -- the target temperature for your body. By controlling a number of body functions like sweating, shivering, and so forth, the body is usually able to maintain a temperature at, or close to, the set point. A number of things can raise our body temperature. For example, if you acquire a systemic infection, the hypothalamus will raise the set point in an effort to combat the infection.

Hyperthermia, on the other hand, is an entirely different phenomenon. In hyperthermia, the body's set point remains the same, but the ability to lose heat by sweating, for example, is overwhelmed by heat that is either internally generated, by exercise for example, or by external heat such as the high temperatures boaters and boat crews experience on a hot summer day. This distinction -- the set point remaining the same --is critical because it guides our choice of therapies. For example, Tylenol and aspirin

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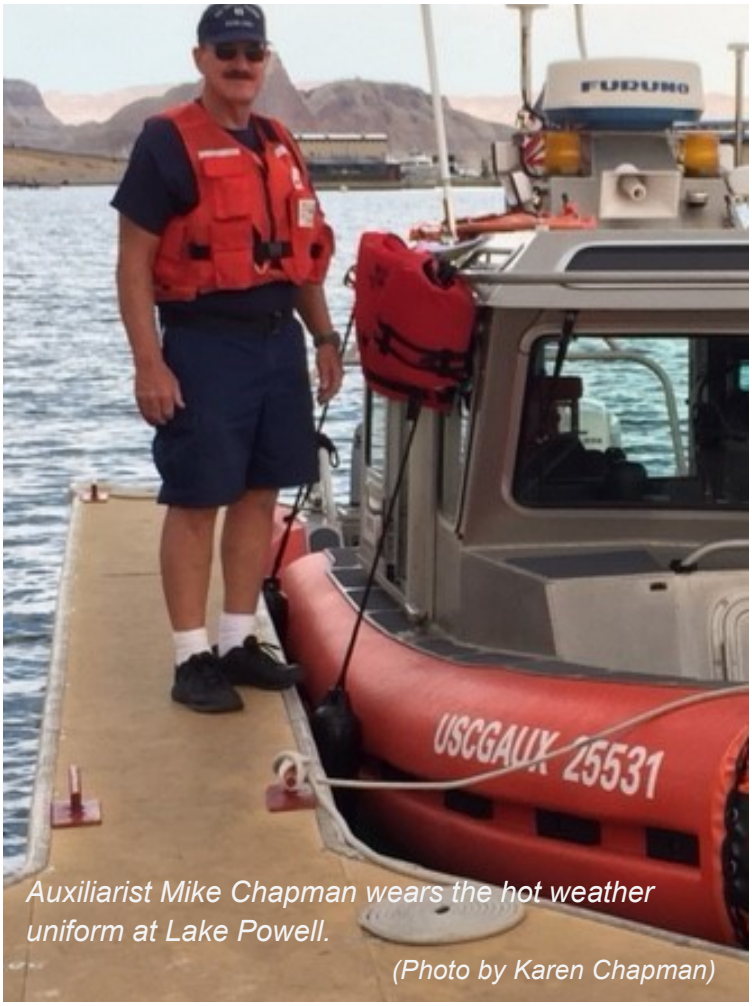


Auxiliarist Mike Chapman wears the hot weather uniform at Lake Powell.
(Photo by Karen Chapman)

will lower the set point, and thus lower a fever caused by infection, but these medications are of no benefit, and may even be harmful, in the case of hyperthermia.

Given that there is variability in numerical thresholds, it will be useful for us to describe hyperthermia in two broad clinical constellations: heat exhaustion and heat stroke. In heat exhaustion, the body has become overheated, and the means by which the body compensates are still in effect. For example, these patients will generally be sweating — evaporation of sweat has a cooling effect.

In heat stroke, the body becomes so hot that, to put it in fairly graphic terms, your brain is cooking, including your hypothalamus, and the compensatory mechanisms are no longer in effect. These patients generally don't sweat. Although we are not emphasizing numerical thresholds, it is generally accepted that a core temperature of 104°F, in combination with a severely altered mental status, and lack of sweating, is highly suggestive of heat stroke. Heat stroke is a critical medical emergency that must be dealt with in a hospital.

Factors Contributing to Hyperthermia

Factors which can contribute to hyperthermia include external sources of heat such as atmospheric temperature, and sun exposure, as well as internal sources of heat such as that caused by physical exertion. Other factors contribute to hyperthermia by preventing the body's cooling mechanisms from being effective. For instance, atmospheric humidity can impede, or totally prevent, evaporative cooling while certain types of clothing can seal heat in.

Older individuals, such as those over 50, and those who are overweight are more pre-disposed to hyperthermia. This is a familiar demographic profile for many in the auxiliary. In addition, those individuals who have already had hyperthermic episodes may be predisposed to additional occurrences.

Another insidious contributing factor is dehydration. Many auxiliary facilities are small boats with limited or non-existent bathroom facilities. How many auxilarists avoid drinking while underway in order to avoid needing to urinate? Does this sound familiar to you?

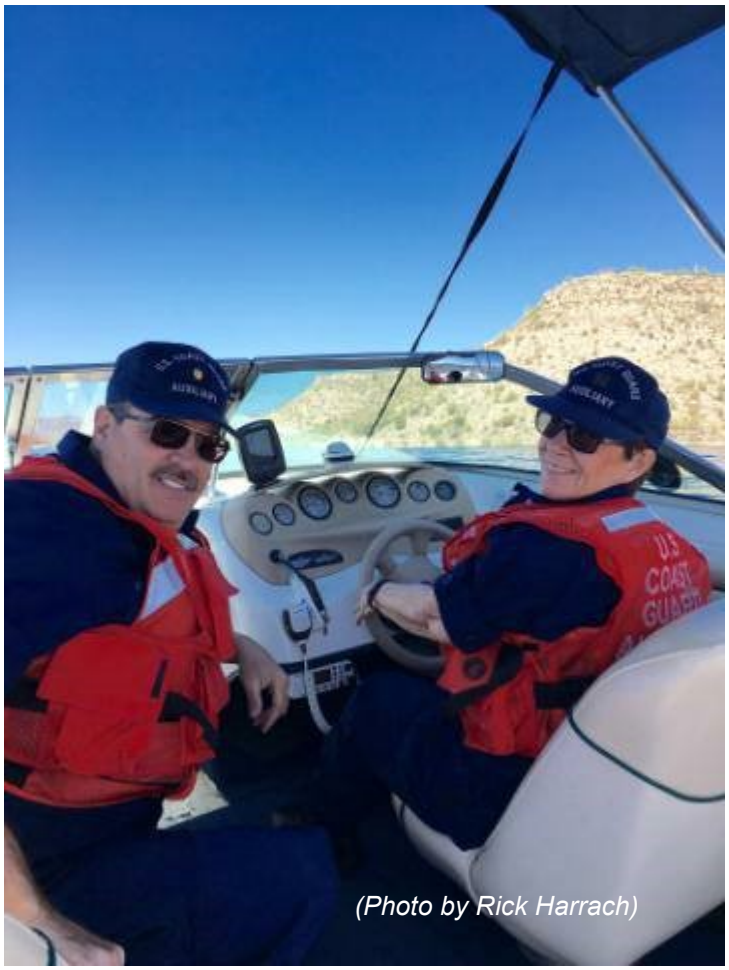
At a recent flotilla meeting, I asked how many in the group don't drink a lot, or at all, while underway, in order to avoid the need for "bathroom breaks." More than half of the people in the room raised their hands!

In addition to lack of fluid intake, there are a number of other common causes of dehydration. Many prescription medications have a diuretic effect. Vomiting, diarrhea, and alcohol intake (presumably the night before) can cause dehydration.

Therefore, if you have recently changed or adjusted your medications, have a GI illness, or previously consumed a significant amount of alcohol, you should be very cautious about getting underway.

To be continued in the next edition of RBS Job One, the Second Installment of Hyperthermia Awareness:

Prevention of Hyperthermia


(Photo by Rick Harrach)

US Coast Guard issues Marine Safety Alert regarding Kidde brand fire extinguishers

Kidde works to make recall and replacement easy for boaters

On November 13, 2017, the United States Coast Guard issued Marine Saftey Alert 12-17 to notify boaters tha nearly 40 million Kidde brand fire extinguishers involving 134 different models have been recalled by the manufacturer. These fire extinguishers were made between January, 1 1973 and August 15, 2017. The extinguishers were sold in red, white and silver cylinder colors and are rated ABC or BC.

This product recall involves two styles of Kidde disposable fire extinguishers: Plastic handle fire extinguishers and plastic push-button fire extinguishers. This recall does not include Kidde Professional or Badger branded extinguishers. Units with metal handles and valve assemblies are not included in the recall.

"All of our boats can create their own wind -- by moving. So, on a hot day, the coxswain should strongly consider cooling the crew by bringing the boat up to speed. "

Dr. Steven Henkind, MD

Replacement Made Easy

The Coast Guard is strongly recommending that all persons owning fire extinguishers read the information available on the Coast Guard and Coast Guard Auxiliary websites where the appropriate hyperlinks are available for specific recall information.

This information can be accessed at http:wow.uscgaux.info/Uploads_wowII/V-DEPT/Safety_Alert12_17.pdf

The Safety Alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. It was developed and distributed by the Office of Investigations and Casualty Analysis, Washington, DC.

Questions may be sent to HQS-PF-fldr-CG-INV@uscg.mil.