

CARBON MONOXIDE (CO)-THE SILENT KILLER

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Boating Safety Committee

As more people enjoy water sports, new studies show that many mysterious drownings are the result of carbon monoxide emissions from boat engines and that recreational boaters should be aware of the dangers of open-air CO poisoning. Boat exhaust can flow back into the rear of the boat and the CO in the exhaust emissions is virtually undetectable.

Since 1990, 482 boat-related carbon monoxide poisonings have occurred in 26 states. Ninety-four of those victims died and 77 lost consciousness. Investigators suspect that the actual number of deaths is much higher because drowning victims are not always tested for carbon monoxide.

Carbon Monoxide enters the bloodstream through the lungs. CO is colorless, odorless and tasteless and persists in the air. Once in the bloodstream, it rapidly starves the body of oxygen. Early symptoms include headache, fatigue, confusion, nausea and dizziness, which are easily confused with heatstroke, seasickness or intoxication. At high levels, it causes convulsions and seizures that can lead to coma and heart attack. People have been poisoned swimming under rear platforms of houseboats, playing in the water near generator exhaust vents of cabin cruisers, and even sitting on the swim platforms of ski boats while the engine was running. However, tubing and water skiing aren't problems because you are further away from the boat.

A 9-year-old girl died and another sickened when they stood in 2 feet of water beside a cabin cruiser as they rinsed their hair in warm water mixed with exhaust that spilled from an idling boat. In another case, a 16-year-old girl died while swimming behind a ski boat as it idled.

A family of two adults and three children went to a lake to water ski. The ski boat was placed in an idling position while one parent put on a ski vest. During this time, their daughter climbed over the back of the boat onto the swim platform and lay in a prone position to push the boat from the dock. In less than one minute, she became unconscious and unresponsive. The girl's father, a family physician, performed rescue breathing. Upon their arrival, the emergency medical team started the child on 100% oxygen through a nonrebreather mask. Nearly 3 hours after exposure, the child's carboxyhemoglobin (COHb) level was 14.3% (normal is less than 5%). Back calculations of COHb levels estimated that her COHb level was 50% to 57% immediately after exposure on the swim platform.

Federal officials and the boating industry have known for years of the dangers of CO poisoning in and around houseboats. The area around the swim deck and the air cavities under houseboats are sometimes referred to as "the death zone."

A man on a houseboat trip dove under the boat to retrieve an anchor rope tangled in the propeller. Upon swimming under the boat, he yelled to his friends that there was an air pocket under the boat and that was the last that anyone heard from him. His body surfaced four days later and tests showed that he had extremely high levels of carbon monoxide in his blood.

There is a new fad called "teak surfing" or "teak dragging." This new and dangerous fad involves an individual holding on to the teak swim platform of a vessel while a wake builds up then lets go to body surf the wave created by the boat; hence the term "teak surfing." Many ski boat enthusiasts view teak surfing and dragging as a safe activity because the propeller is located under the middle of the boat, making a propeller strike highly unlikely. In truth, the surfer's head is inside a "bubble," an area around the swim step where CO accumulates in a pocket.

A 15-year-old girl died while "teak surfing" behind a friend's Master Craft ski boat. What the girl didn't realize was that she was putting her face right in a stream of carbon monoxide gas from the boat's engine. She was ultimately overcome by fumes, let go and drowned in the water, although her carbon monoxide levels alone were sufficient to be fatal.

Please share this information and tell anyone who owns a pleasure boat with rear exhaust vents about the danger that they may be putting themselves, their friends or family in by occupying the rear swim platform or waters immediately behind the boat. Safety experts have urged boating and water enthusiasts not to occupy the swim platform or water within 20 feet directly behind the boat.