



SAFETY ALERT

GOLF CART BATTERIES & HYDROGEN GAS

Bald Head Island Public Safety would like to make you aware of an unexpected golf cart charging hazard first published in [Firehouse Magazine](#). Bald Head Island has responded to calls of this nature and feel that it is important to get this information out to the public.

The Firehouse Magazine article describes an incident in which a fire department from central Florida was dispatched for a **carbon monoxide detector** that had alarmed. After ventilating the structure the apparent carbon monoxide levels dropped to zero. The electric golf cart, that was charging in the garage, was unplugged and the residents felt fine and declined any treatment. The fire department decided to do some additional research due to similar carbon monoxide detector activations involving golf carts that were being charged.

It was determined that lead batteries do not emit carbon monoxide. They do, however, emit hydrogen. It was also noted that carbon monoxide detectors will activate when exposed to high amounts of hydrogen. Hydrogen gas like carbon monoxide is a colorless and odorless gas. **If your carbon monoxide detector sounds, evacuate the home immediately and then call 9-1-1.**

Like, carbon monoxide, hydrogen can cause **asphyxiation**. Excess hydrogen, could also lead to **fire and explosion**. For this to occur there would need to be:

1. Accumulation of hydrogen gas
2. Failure to detect the hydrogen
3. Source of ignition



Little data is available indicating the health effects of long-term exposure to the gases given off during a battery charging process. The quantity required to cause death is very substantial. Many occupants have complained of headaches, nausea, difficulty breathing and vertigo. This is believed to be caused by the oxygen displacement rather than the hydrogen gas itself.

Newer golf carts and chargers do allow for the automatic shutoff of the charging system when the cycle is completed. Some of the older golf cart models and after-market charging systems do allow for the continuous charging and as a result can produce continuous production of hydrogen gas. **If you own an electric golf cart or an after-market charging system for the cart, it is recommended that you check with the manufacturer to find out if your system allows for the automatic shutoff when the charging cycle is completed.**