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Snapshot Size-Up #140

Carbon Monoxide Tips

Carbon monoxide (CO) is a colorless, odorless gas that is the leading cause of accidental poisoning deaths in America. It is also responsible for more than 10,000 illnesses per year. CO is a by-product of incomplete combustion of fuel sources such as natural gas, gasoline, wood, oil, propane, coal, or kerosene. Solid fuels generate the most CO, liquid fuels generate less, and gas fuels produce the least; however, because these fuels never burn completely, virtually every flame used in the home routinely generates harmless levels of CO. When incomplete combustion or poor ventilation takes place, dangerous levels of CO may spill into the house, resulting in occupants exhibiting symptoms of CO poisoning. Hopefully, the occupant has a CO alarm that will alert them of the danger. If not, they may never know the problem exists until it's too late. Firefighters arriving on the scene should understand that their role in CO investigations is to locate the source, eliminate the source, and make the building safe for occupants before leaving. If there are victims, your responsibility is expanded to providing medical treatment (or calling EMS personnel to the scene so they can do so).



A



B

Investigating the source of CO can sometimes baffle even a seasoned firefighter, which is why I dedicated an entire chapter to this in the book *Fireground Operational Guides*. During the holiday seasons, we receive more CO alarms than we do during other times of the year. Don't always assume this is due to home heating appliances. The photo above was taken at a home where we received extremely high CO levels in the back bedroom of the home. As it turned out, the CO came from the stove and was the result of an occupant placing an aluminum pan cover on top of the vent holes inside the appliance (See Photo A). After baking cookies for several hours, the CO migrated to the back room and set off their alarm which prompted them to call us. Although I didn't take a photo of their holiday cookies, I must admit, they sure did look good!

If you come across an incident where people are doing this, remove the material covering the vent holes and inform them of the danger (See photo B). For more on CO investigations, refer to Ch. 5 of *Fireground Operational Guides*.

Vent Holes



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