# Carbon Monoxide Alarms

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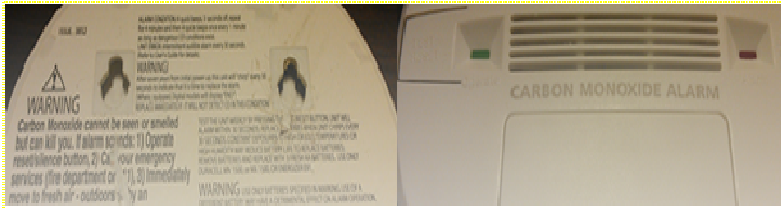
We have all been on these, "XYZ Fire report to 100 north Main for a CO Detector alarming, no symptoms at this time."

Upon arrival, fully turned out and ready to mask up, you inch towards the entry point with monitor in hand. You know a small amount of CO is normal as you start inside the home. As you do the chirp of the alarm is heard every 30 seconds or so. You have heard full alarm before with measureable amounts of the poisonous gas. However, this one is different. What is going on here? Key points to consider:

1. The detector alarming is typically not a false indication of high CO readings. The unit could be malfunctioning, needs batteries or is signifying some other type of error.
2. Occupants sometimes do not fully understand their detectors, which is the most common reason we are called for an "activated detector."
3. Take the opportunity for a "teachable" moment with the occupant. Guide them to the back of the detector where critical information may be present about the specific model and the importance of detector upkeep.
4. NIOSH recommended exposure limits are 35ppm per 8 hours as a TWA and 200ppm as a ceiling level. Some home units are designed to not alarm until 400ppm.
5. Carbon monoxide is an asphyxiant that exerts its toxic effects by combining with the hemoglobin of the blood, which decreases the amount of oxygen delivered to the tissues.




***REASONS FOR CO DETECTOR ACTIVATIONS***

Batteries need replacing.

End of detector life.

Other manufacturer's errors.

*Refer to User's Guide for details.

## How they work!

Some of the most common units use an electrochemical cell that is designed to produce current in relation to the amount of carbon monoxide present in the air. CO is oxidized to CO2 at one electrode while oxygen is consumed at the other electrode. Sulfuric acid is the usual electrolyte that separates the electrodes. The current triggers the alarm or can even be used to quantify the amount of carbon monoxide that is present.

**Presume all calls for Carbon Monoxide Alarms are due to elevated readings. Wear PPE, including SCBA and Face piece until the atmosphere is declared clear using a carbon monoxide meter.**