



Tooele City Fire Department

- Carbon Monoxide (CO) Detectors -

Carbon Monoxide (CO) is an invisible, odorless, tasteless gas produced by incomplete combustion. Any fuel burning appliance, vehicle, tool or other device has the potential to produce dangerous levels of Carbon Monoxide gas.

Common CO producing devices around the house.

- Fuel fired furnaces (non-electric)
- Gas Water Heaters
- Fireplaces and Woodstoves
- Gas Stoves
- Gas Dryers
- Charcoal Grills
- Motorized Yard Equipment
- Automobiles

It kills thousands of people each year, and injures many more. Since you cannot see, taste, or smell carbon monoxide, a Carbon Monoxide detector is the only way to alert you to increasingly dangerous levels of carbon monoxide before tragedy strikes.

Carbon Monoxide, like Oxygen, enters the body through the lungs during the normal breathing process. However, carbon monoxide competes with oxygen. Carbon monoxide combines with red blood cells approximately 300 times easier than oxygen. Therefore, it blocks the oxygen from your body over a period of time and if concentrations get high enough, carbon monoxide can kill you in minutes. It takes approximately five hours for the levels of carbon monoxide attached to the blood cells to be reduced to 50%.

Carbon Monoxide concentration levels are measured as Parts per Million (PPM). Here is a breakdown of carbon monoxide ppm and their effect upon a typical adult male.

PPM CO	Elapsed Time	Symptoms
35 ppm	8 hours	The maximum allowed exposure for a continuous exposure in any 8-hour period.
200 ppm	2-3 hours	Mild headache, fatigue, nausea and dizziness.
400 ppm	1-2 hours	Serious headache - other symptoms intensify. Life threatening after 3 hours.

800 ppm	45 minutes	Dizziness, nausea and convulsions. Unconscious within 2 hours. Death within 2-3 hours.
1600 ppm	20 minutes	Headache dizziness and nausea. Death within 1-2 hours.
3200 ppm	5-10 minutes	Headache, dizziness and nausea. Death within 1 hour.
6400 ppm	1-2 minutes	Headache, dizziness and nausea. Death within 25-30 minutes.
12,800 ppm	1-3 minutes	Death

As the information above illustrates, the symptoms vary widely based upon exposure levels, duration and the general health and age of the individual. You will notice one recurring theme that is most significant in recognizing Carbon Monoxide poisoning. That is the presence of a headache, dizziness and nausea. These flu like symptoms are often mistaken for a real case of the flu and can result in a delayed or misdiagnosed treatment.

Carbon monoxide accidents are preventable. Actions you should take to protect your family are:

- Every fall you should have a qualified technician inspect your gas furnace and appliances.
- Never allow your car to run in an enclosed area, especially if it is attached to your house.
- Make sure your fireplace is in good repair and do not close the damper before the fire is out.
- Install CO alarms to give your family a warning if CO is building up in your house.

Several types of CO alarms are on the market. One type is plugged into a wall socket and has a life of about 10 years. The other type of alarm uses a chemical sensor and battery. The sensor/battery unit has a two year limited warranty and does indicate a low battery by beeping once a minute. To keep this alarm operating properly, the sensor/battery must be replaced when the battery is low. CO alarms can be purchased at many local hardware and small appliance stores at a cost of \$35 to \$50. Make sure the alarm that you purchase has an Underwriters Laboratory (UL) label.

Regardless of the alarm you choose, there are some things you need to know. Carbon monoxide alarms should be located on every floor and mounted according to the manufacturer's instructions. If the alarm goes off, everyone should get out of the house at once and call the fire department by dialing 911 from a neighbor's house. Do not ventilate your house by opening doors and windows. When the fire department personnel arrive they will obtain CO readings in different areas of your home to determine the source of the CO. Another very important point to remember is that you still need a working smoke alarm on every level of your home. The CO alarm does not sense smoke or fire. Smoke alarms are needed to give your family early warning if there is a fire in your home.

If you are concerned about whether your furnace and/or appliances are working properly, contact your contractor to have an inspection. If you have questions about your gas furnaces or appliance, contact your gas company. If your CO alarm gives a warning signal, get out of the house and call the fire department. If you have any questions about carbon monoxide detectors, please [contact us](#).