

## Carbon Monoxide

Carbon monoxide is a colourless and odourless toxic gas. Because you can't see, taste, or smell it, it can affect you or your family before you even know it's there. Carbon monoxide is harmful because it will rapidly accumulate in the blood, depleting the ability of the blood to carry oxygen.

Carbon monoxide is produced when fuels are burned incompletely (without sufficient oxygen to produce carbon dioxide). Tobacco smoking, idling gasoline-powered vehicles, and the burning of oil, coal, wood, propane or natural gas can all produce carbon monoxide.

The vast majority of deaths from carbon monoxide are caused by fires and from automobile exhaust, and the risk from natural gas is extremely low. However if the by-products of combustion are disrupted from being safely vented to the outside (bird's nest in the chimney) or there is a shortage of oxygen to the burner, carbon monoxide production can quickly rise to dangerous levels. A vehicle should always be removed from a garage as soon as it is started.

The symptoms of carbon monoxide poisoning are flu-like symptoms such as headache, running nose, sore eyes, for mild exposure. Drowsiness, dizziness, vomiting, a sense of disorientation, are signs of medium exposure. Extreme exposure is unconsciousness, brain damage and death.

If you walk on a busy four lane street, the CO concentration could likely be around 5 parts per million. (ppm). Maximum tolerable indoor concentration over an eight-hour period is 11. Maximum allowable concentration for continuous exposure for healthy adults in any eight-hour period is 25. Two to three hours of exposure at 200 ppm would cause headache, fatigue, dizziness and nausea. **It should be noted that different individuals will react differently at different levels of exposure.** Infants, the elderly and those with respiratory and heart conditions may react to lower levels of CO poisoning.

While carbon monoxide alarms may provide an extra measure of warning, they should never be relied upon as a substitute for regular inspection and maintenance of natural gas, propane, oil or wood burning appliances, proper venting and chimneys in good condition.

The best carbon monoxide alarm should show the level of carbon monoxide present. Digital display allows you to take action before dangerous levels are reached. Units without a display will only alarm when 'potentially hazardous carbon monoxide' levels are present. The best alarm should also have a 'peak-level' display feature, probably on a push button that would allow you to review any levels present while you were away. An electrochemical detector is the most accurate and the most expensive. Make sure the detector has an alert sensor when the battery needs replacing if battery operated.

The best location for a CO detector is in the hallway adjacent to your bedrooms. The best height is at the height that most of the people are sleeping at.

The door from the house to the vehicle garage should be self-closing and latching when released from half open. The weather stripping should seal properly against the door.

The above information reflects research based on the current information on carbon monoxide. Vriend Home Inspections does not assume any responsibility for any consequences arising from the use of the above information, or any materials and techniques described.

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