

ASK THE INSPECTOR COLUMN FOR OCTOBER 28, 2015

HEADLINE: TIME TO CHECK THE CARBON MONOXIDE DETECTOR

Every year around this time there are numerous messages about the dangers of carbon monoxide and the potential health effects of this kind of poisoning. Carbon monoxide (CO) is an off gassing caused when gas, oil, kerosene, wood or charcoal are burned, so it's not just limited to natural gas. While home appliances are the major cause, the list also includes: an auto idling in an attached garage with the access door to the home open; cooking that "winter BBQ" in the comfort of the same garage; portable generators during a power outage, and an improper draft from a wood burning appliance. It's actually a long list. CO is produced by incomplete combustion of fossil and solid fuel.

CO is measured in parts per million of concentration (PPM). At 35 PPM, it will give occupants of a home a headache and dizziness in 6-8 hours. At 200 PPM, this headache now occurs in 2-3 hours. If it jumps to 800 PPM, dizziness and nausea will occur in less than an hour. If you are experiencing any of these symptoms and when you leave the home they clear up after an hour or so, you best check your home, asap. An example I have on how serious this can be is a reference on wood appliances, improperly used. If a wood fire exhausts into an average home, the fire can emit up to 5,000 PPM. At this level you will feel these symptoms within 10 minutes; death often happens within half an hour. You should react immediately if you feel these symptoms. Leave the home quickly and then call 911 on your cell-phone or go to a neighbour and ask for help

While there is ample information on CO and the affects, there is limited information on detectors and their use. Proper placement of carbon monoxide detectors can make the difference in whether they are effective or not. The number one location is in the hallway or access point to any sleeping area in a home. The most commonly recommended distance is ten feet from a bedroom door. I often seen them in the hallway of a home, yet the basement bedroom is left with no protection. They should be located on every level of a home, including the basement and not located within fifteen feet of an appliance. This includes the gas stove in the kitchen. Location of a detector should be dictated by the manufacturer's recommendations, as they are required to test their products to meet standards. In a new home in Ontario, they are now code and are usually a ceiling mounted combined smoke detector and CO detector. Typically, hard wired

models are located on the ceiling, battery powered models plug into the wall and are tested for that location.

There are numerous makes and models and this is a product where saving a buck may be ill advised. Kidde and First Alert make recognized models with various features, including digital readouts, which are popular. Often the first sign of problems is that the reading starts to increase. We also know that the ionizer type of smoke detectors have a “shabby” track record for accuracy. Find a good combination model that does CO and both kinds of smoke detection built into one unit. Your life may depend upon it someday.

CO is similar in weight to air; it’s just slightly lighter. It will distribute within the air movement in a home and a forced air heating system is a natural method of moving this off-gas. It is colorless, tasteless and odourless and impossible to detect without a warning device. That said, CO detectors are not the sole answer. Proper use and maintenance of your fuel burning appliances is the first line of defence. The technology used in CO detectors, while light years better than they were as little as ten years ago, is an evolving technology and from brand to brand and even model to model testing results shows some inconsistencies in their operation. We recommend they are changed every five years or as per manufacturer’s specs. Most state five years for replacement. Some of the newer makes even produce a signal when it’s time to be replaced.

If your CO detector goes off, first make sure it’s not your smoke detector and move everyone in the home to the exterior. Ask if anyone feels sick, headaches or nausea. For children or the elderly, call 911, as they should be taken to the hospital immediately if they show any signs of CO poisoning. Open the home and allow for a full exchange of air throughout the home. Shut off all potential CO emission related appliances and call your licensed TSSA technician to inspect your appliances and include any chimneys.

One area that is often not discussed, is when there is a constant, low level presence of CO in a home, it can have long term health effects. This is why I recommend buying the CO detectors with a digital readout. Monitor them weekly, especially during the winter months. As we move closer and closer to energy efficiency, we are tightening up our homes and, unfortunately, are allowing CO to become a growing issue.

Carbon monoxide detectors are now law in Ontario. Every home, new or old, must have them on every occupied level of the home. At every inspection we do, I recommend that the clients check them, if installed, the day they move into their new home and, if needed, replace them ASAP.

