

The Better Home Inspection Newsletter

It has come to light and with some frequency that some home gas stoves have been emitting too high and even dangerous levels of C.O. gas.

What is C.O.? C.O. stands for carbon monoxide. It is produced from incomplete combustion of fossil fuels, in this case, natural gas. It is colorless, tasteless and odorless. Detection is impossible without a carbon monoxide detector. Optimally, with correct fuel/air mixture, clean and proper burner adjustments, near complete combustion can be reached with a clear/blue flame. Orange to yellow tips with a blow torch sound is a sign of incomplete combustion and C.O. production.

According to the “Consumer Product Safety Commission” (CPSC) carbon monoxide levels in a home above 70 parts per million (ppm) can cause symptoms including headaches, fatigue and nausea. C.O. detectors are calibrated to alert at 70 ppm. Sustained C.O. levels with prolonged exposure of about 150 ppm can cause disorientation, unconsciousness and death. Risks are increased for the elderly, children and those with breathing disabilities.

The CPSC recommends if you have a gas stove/ range:

- Never put foil on the bottom of your gas range because it interferes with combustion.
- Never cover slots or holes in the bottom of your oven or the entire rack with foil.
- Make sure to turn the vent fan on over your stove while operating.
- Don't use your stove to heat your home.
- Don't place C.O. alarm near fuel burning appliances. (Minimum of 15 feet) Brief periods of higher levels can occur at” startups” and when “auto cleaning” the oven.
- Do place a C.O. detector in the hallway outside bedroom doorways or one inside each bedroom.

If a microwave oven has been installed over a gas range it should exhaust to the outside. When I purchased my “over the range microwave” I was told that it was optional to either use the vent attachment or if there was no vent to follow the instructions that switch over to the charcoal filters, and there certainly were such instructions. The charcoal filters do not remove C.O. from the air. The hooded vent fan over the range should also exhaust outdoors and not into the attic. Opening a window certainly changes the ratios allowing C.O. to escape and diluting the air but the exhaust fan over the gas range is designed for that purpose and therefore recommended for safer operation. It is further recommended that your gas oven and range be periodically serviced to insure it is operating at its peak efficiency at or close to complete combustion with clear / blue flames.

A lot of care and concern is taken when inspecting a gas furnace with the same gas and similar burners. The main difference between a furnace and the gas stove is that in a furnace the combustion occurs

within the enclosed heat exchanger where the combustion byproduct vents up through a flu and out to the exterior.

Of course a gas range for cooking is not used with the same prolonged time usage as your furnace but none the less combustion byproducts should always be vented to the exterior. These are a few simple things that we can all do to keep our homes and families safe. As for the C.O. detector, every home that uses gas should have them! Consider them life insurance, and I don't mean a policy.

Be well and stay safe,

Doug Sidwell