

COLUMN FOR APRIL 3, 2004.

HEADLINE; CARBON MONOXIDE THE 'SILENT KILLER'

I am going to stray from my usual format of a question and answer column. I have received a number of questions about Carbon Monoxide (CO). I understand there was a tragic accident recently in Kingston Ontario and some of my readers in this area understand this was connected to CO. Many of the questions I received wondered why CO has become a problem; some questioned why the government has not done something about this. I will try and address the main points.

I think the first thing everyone should know is, what is carbon monoxide? It is a poisonous gas that you cannot smell, see or taste. How does CO affect us? CO is breathed in thru the lungs and bonds with the haemoglobin in your blood. It displaces the oxygen which the cells need to function. When CO is present in the air it will quickly accumulate in your blood and when enough of it is present in your system you simply suffocate from the inside out, it can cause brain damage and eventual death in extreme cases.

What are the symptoms of excessive CO in your home? Your children and your pets will tell you first, they will seem to be confused, with evidence of drowsiness and dizziness. If your children complain of headaches, burning eyes and nausea these are also symptoms. Older people will suffer the same symptoms, especially if they have heart or respiratory conditions. You may notice the air in your home is very stale or stuffy. If you smell gas when your gas furnace or gas fired hot water heater starts up or has the pilot light gone out repeatedly recently? Do you see a white powder around the vent pipe; is there excessive soot build-up? All of these are symptoms that need immediate inspection. I can remember an instance a couple of years ago when I was inspecting a home and when I entered the furnace room the smell of gas was very evident. The laundry facilities were also in this room and I went upstairs to speak to the lady of the home. I asked her if she had experienced any health issues and she said when she went to the basement she got a headache but when she went upstairs or went outside, it went away. Her response was, I just stay upstairs!

Every question I got from my readers asked what generally causes a CO problem. This is easy to answer; lack of care and maintenance of fuel burning appliances and their vent systems and homes that are too air tight. All fuel burning appliances, natural gas, propane, oil and wood create CO in some form. This includes your gas or oil fired furnace or hot water heaters, clothes dryer if it is gas or propane, wood stoves, fireplaces, space heaters, gas ranges, even your barbeque will if it is used in a confined space. I am sure everyone can remember hearing about the CO problems during the last ice storm and people cooking in their garage with the door closed. The other major issue is CO seepage from exhaust fumes from a car running in an attached garage and the passage door to the home is left open. Newer homes that are well insulated or one that has seen major renovations with no regard for an air supply for the fuel burning appliances are an issue. In our rush to insulate and seal our homes, we have forgotten that the furnace, wood stove and the hot water heater need combustion air to operate properly.

Now that we have discussed what it is, how it can cause serious health issues and where it causes problems, now let's solve the problem. The number one issue is service and maintenance of your CO producing appliances. If there was ever a reason to get these serviced annually, this is the reason! If your furnace is over 15 years old, have the technician do a heat exchanger test. This is a hidden area in the furnace that can and does cause a major CO issue and is difficult to view. A TSSA licensed HVAC contractor should be hired for this test. Discuss the combustion or make-up air for your home with your heating specialist, establish if there is enough to satisfy your home and review all of your appliances that operate on a combustion fuel. If your garage is attached to your home, make sure your passage door has a strong self closer installed, one that will close the door tight. I would guess that 75% of the homes we inspect lack a proper self-closer.

I was asked why the government has not stepped in here, well they have but only in the past year did they mandate CO detectors in new homes. Where do we recommend them? You should have one a minimum of 6 feet or according to manufacturers specs from your furnace and hot water heater. These two are the largest CO offenders. Another one should be at in the hallway going to the sleeping quarters and installed no more than 2

feet off the floor. If your home has more than one level, install one on each level. Many homes have a plug in the hallway and I see them installed there, often behind a piece of furniture. Move the furniture; the detector needs a clear air space to work properly. In Canada a CO detector must bear the CSA CAN/CGA 6.19 standard of the UL 2034 seal. Why were CO detectors not required before now? The technology was simply not available in a compact form for home installation. Many heating technicians carry a CO detector, I carry one in my truck but it is a bulky instrument. About 15 years ago a company called First Alert patented a sensor module that was compact enough for home use to detect CO and now many manufacturers sell numerous models. If you are going to buy these for your home, invest in the units with the battery backup. If the power goes out you are still protected. Remember to test your CO detectors monthly.

Lastly, what do we do if we feel we have a CO problem? If you or anyone in your family is experiencing the symptoms of CO poisoning, get out of the home immediately and leave the door open. Call from your neighbours or your cell phone for the fire department. If someone needs medical help, make that call first. If your detector goes off and everyone says they feel OK, still take no chances, vacate the home and call the fire department and if you have a TSSA licensed contractor who regularly services your appliances, call them in too. Remember, there is no second chance with CO poisoning.

Now the answer to last weeks "Trivia about Homes" question. Who invented the Snow Blower? Its creator was a Canadian by the name of Arthur Sicard. Mr Sicards Company went on to become one of the largest commercial snow blower companies in the world at one point. This weeks question is "Lead was used in Paint for many years and is now known as a health hazard. When was lead banned in Paint? Was it A) 1960 B) 1976 C) 1991 D) Never fully banned. The answer in next week's column!

Cam Allen L.I.W. RHI is a former builder/contractor and now operates a Private Inspection Company. He can be reached at [cam.allen@sympatico.ca](mailto:cam.allen@sympatico.ca)