

## **Carbon monoxide: The Silent killer!!!**

You can't see or smell carbon monoxide, but at high levels it can kill a person in minutes. Carbon monoxide (CO) is a poisonous, colorless, odorless, and tasteless gas. Although it has these properties, but the danger it poses is real. Carbon monoxide replaces oxygen in your blood — and the consequences may lead to sudden illness and death. CO is often mixed with other gases that do have an odor. So, you can inhale carbon monoxide right along with gases that you can smell and not even know that CO is present.

CO, a common industrial hazard, is produced whenever any fuel such natural gas and any other material containing carbon such as gasoline, kerosene, oil, propane, coal, or wood is incompletely burned. CO is found in combustion fumes, such as those produced by cars and trucks, small gasoline engines, stoves, lanterns, burning charcoal and wood, fireplaces, and gas ranges and heating systems. Smoke inhalation during a fire also can cause carbon monoxide poisoning.

Dangerous amounts of **CO** from these sources can accumulate in enclosed or semi-enclosed spaces when, as a result of poor installation, poor maintenance or failure or damage to an appliance in service, the fuel is not burned properly, or when rooms that don't have a good flow of fresh air and the **Carbon Monoxide** is unable to escape. Sometimes carbon monoxide can accumulate to dangerous levels in your car, home or other poorly ventilated areas. People and animals in these spaces can be poisoned by breathing it.

If appliances that burn fuel are maintained and used properly, the amount of CO produced is usually not hazardous. However, if appliances are not working properly or are used incorrectly, dangerous levels of CO can result. Hundreds of people die accidentally every year from CO poisoning caused by malfunctioning or improperly used fuel-burning appliances. Even more die from CO produced by idling cars. The signs of carbon monoxide poisoning can be subtle — but, simple precautions can save your life. Be safe. Practice the DO's and DON'Ts of carbon monoxide.

### **How does CO harm you?**

Carbon monoxide poisoning is caused by inhaling carbon monoxide fumes. Red blood cells pick up CO quicker than they pick up oxygen. When there's too much carbon monoxide in the air, your body may replace oxygen in blood with CO. Carbon monoxide is harmful when breathed because it this keeps life-sustaining oxygen from reaching your tissues and organs, and deprives the heart, brain, and other vital organs of oxygen, which can damage tissues and result in death. Large amounts of CO can overcome you in minutes without warning—causing you to lose consciousness and suffocate.

## Symptoms associated with CO poisoning

Know the symptoms of CO poisoning. As initial symptoms of CO poisoning, at moderate levels, you or your family can get severe or dull headache (the most common early symptom), become dizzy, mentally confused, irritable, Impaired judgment, nauseated, or faint, and tightness across the chest. Sudden chest pain may occur in people with angina. You can even die if these levels persist for a long time. During prolonged or high exposures, symptoms may worsen and include vomiting, confusion, and collapse in addition to loss of consciousness, muscle weakness, brain damage and even death.

Low levels can cause shortness of breath, mild nausea, and mild headaches, and may have longer term effects on your health. People who are sleeping or intoxicated can die from CO poisoning before ever experiencing symptoms or realizing there's a problem. Unless suspected, CO poisoning can be difficult to diagnose because the symptoms mimic other illnesses as flu and food poisoning and because the deadly gas goes undetected in a home. Thus, you may not think that CO poisoning could be the cause.

Symptoms vary widely from person to person. The above information is for a healthy adult persons, elderly people, and people with anemia or with heart or respiratory health problems, infants and small children, unborn children, expectant mothers or those who already have elevated CO blood levels, such as smokers, can be affected by CO poisoning more quickly than others in the household and may be the first to show symptoms.

### Play it Safe- Take action quickly

If you suspect CO poisoning or experience symptoms that you think could be from CO poisoning, as headache, dizziness, nausea, vomiting, chest pain, confusion, promptly taking the following actions can save lives:

### Evacuate > Ventilate > Investigate

- ✓ **DO GET FRESH AIR IMMEDIATELY.** Move the affected person immediately to fresh air in an open area. Open doors and windows, turn off combustion appliances and *leave the house*
- ✓ **DO CONTACT MEDICAL HELP.** Call your local emergency number for medical attention or assistance.
- ✓ **DO PERFORM CPR.** If the person is not breathing, perform artificial respiration as taught in Cardiopulmonary Resuscitation Training until medical help arrives.
- ✓ **DO GO TO AN EMERGENCY ROOM** and tell the physician you suspect CO poisoning. If CO poisoning has occurred, it can often be diagnosed by a blood test done soon after exposure.
- ✓ **DO** Be prepared to answer the following questions for the doctor:

- Do your symptoms occur only in the house? Do they disappear or decrease when you leave home and reappear when you return?
  - Is anyone else in your household complaining of similar symptoms? Did everyone's symptoms appear about the same time?
  - Are you using any fuel-burning appliances in the home?
  - Has anyone inspected your appliances lately? Are you certain they are working properly?
  - Do you suffer from any acute or chronic medical problems?
- ✓ **DO FIX THE PROBLEM.** Investigate the source of **Carbon Monoxide** and make repairs before you return. Seek advice if needed.

### ***Prevention is the Key to Avoiding Carbon Monoxide Poisoning***

Simple precautions can help prevent carbon monoxide poisoning. Consider these do's and don'ts:

- ✓ **DO** Check the flame colour of your appliances; if it's Orange you do have a problem. However, Blue does not necessarily mean it's safe.
- ✓ **DO** have your fuel-burning appliances -- including oil and gas furnaces, gas water heaters, gas ranges and ovens, gas dryers, gas or kerosene space heaters, fireplaces, and wood stoves -- inspected by a trained professional at the beginning of every heating season. Make certain that the flues and chimneys are connected, in good condition, and not blocked.
- ✓ **DO** have an expert check your refrigerator, if you smell an odor from your gas refrigerator's cooling unit. An odor from the cooling unit of your gas refrigerator can mean you have a defect in the cooling unit. It could also be giving off CO.
- ✓ **DO** choose appliances that vent their fumes to the outside whenever possible, have them properly installed, and maintain them according to manufacturers' instructions. All gas appliances must be vented so that CO will not build up in your home, cabin, or camper.
- ✓ **DO** read and follow all of the instructions that accompany any fuel-burning device. If you cannot avoid using an unvented gas or kerosene space heater, *carefully follow the cautions* that come with the device. Use the proper fuel and keep doors to the rest of the house open. Crack a window to ensure enough air for ventilation and proper fuel-burning.
- ☒ **DON'T** run the car in a closed garage. If you have an attached garage, keep the garage door open and the door to the house firmly closed while the car is running. Fumes can build up very quickly in the garage and living area of your home. **Open the garage door before starting your car.**

- ☒ **DON'T** use a gas oven to heat your home, even for a short time. Using a gas range or oven for heating can cause a build up of CO inside your home, cabin, or camper.
- ☒ **DON'T ever** use a charcoal grill indoors -- even in a fireplace. Use portable gas camp stoves only outdoors. Using a grill indoors will cause a build up of CO inside your home, cabin, or camper unless you use it inside a vented fireplace.
- ☒ **DON'T** sleep in any room with an unvented gas or kerosene space heater. Use fuel-burning space heaters only when someone is awake to monitor them and doors or windows are open to provide fresh air.
- ☒ **DON'T** use any gasoline-powered engines (chain saws, small engines or generators) in enclosed spaces or inside your home, basement, or garage or near a window, door, or vent.
- ☒ **DON'T** patch a vent pipe with tape, gum, or something else. This kind of patch can make CO build up in your home, cabin, or camper.
- ☒ **DON'T** ignore symptoms, particularly if more than one person is feeling them. You could lose consciousness and die if you do nothing.

### **Final thoughts**

CO poisoning can be reversed if caught in time. But even if you recover, acute poisoning may result in permanent damage to the parts of your body that require a lot of oxygen such as the heart and brain. Significant reproductive risk is also linked to CO.

Having no smell, taste or colour, in today's world of improved insulation and double glazing, it has become increasingly important to have good ventilation, maintain all appliances regularly and to have absolutely reliable Detector alarms installed giving both a visual and audible warning immediately there is a build-up of **CO** to dangerous levels.