

Carbon Monoxide: A Silent Killer

Winter weather and plummeting temperatures mean cranking the heat indoors. When the use of indoor heating systems or mobile space heaters increases, so does the risk for carbon monoxide (CO) poisoning.

According to the Centers for Disease Control and Prevention (CDC), accidental CO poisoning brings approximately 50,000 people to the emergency department and causes more than 400 deaths each year across the nation – many of which occur during the winter months. While, in general, most people know that CO poisoning can be very serious, many people do not know exactly how accidental poisoning can occur, or what it does to our bodies.

“With carbon monoxide poisoning what happens is that you breathe it in and it has a higher affinity for the red blood cells, and then that does not allow the oxygen to be transported to your muscles and the rest of your organ systems appropriately,” says Lauren Petoskey, an OSF HealthCare family medicine physician assistant.

Sources of CO commonly found in homes include: gas stoves and ovens, non-electric space heaters, furnaces, both gas and wood burning fireplaces, and malfunctioning dryers, water heaters, and cooking appliances. CO is also produced by things stored outdoors or in a garage, such as cars, trucks, small engines, grills, and lawn equipment.

Because CO has no smell and cannot be seen or heard, a person can become ill without knowing the cause. This is why CO poisoning is referred to as a “silent killer.”

While everyone is at risk for CO poisoning, infants, the elderly, and people with chronic heart disease, anemia, or breathing problems have a higher risk of getting sick from CO. The symptoms of CO poisoning can be fairly vague, making them easy to disregard until they worsen, but Petoskey advises individuals not to ignore any symptoms.

“They are very general signs and symptoms like fatigue, headache, some people experience dizziness – and prolonged exposure or overexposure can cause confusion, syncope or passing out, and can even lead to death,” Petoskey warns.

She adds, “If a baby is exposed there may be even more general symptoms. There might be a bit more fussiness or not eating as well. So it’s a little bit harder to pick up on if you have an infant.”

The most effective way to detect a CO leak early is by having a battery-operated or battery back-up carbon monoxide detector in your home, and checking or replacing the battery every few months. To help serve as a reminder, it is recommended to check your CO detector battery every time you adjust your clocks in both spring and fall.

The CDC also recommends taking the following measures to help prevent CO poisoning: have your heating system, water heater, and any other gas, oil, or coal burning appliances checked by a qualified technician each year; have your chimney checked or cleaned each year; if you smell an odor from your gas refrigerator, have it serviced, as an odor from a gas refrigerator can actually indicate a CO leak; make sure your gas appliances are vented properly; never use a gas range or oven for household heating; never burn charcoal indoors; and never use a generator inside your home.

It is also important to take safety measures outside the home, like having a mechanic check the exhaust system of your car or truck each year – and never leaving your vehicle running inside a garage even if the garage door is open, especially if it is attached to your home.

“Because the symptoms are very general, that’s what makes the diagnosis difficult. If you have a known exposure – say there was a car that was running and it wasn’t in a very well-ventilated area, or you have a gas heater in the house and you have concern that it may be faulty – those would be higher risk factors. And if you are having the associated symptoms, that’s when I would recommend that you seek medical attention,” advises Petoskey.

According to the CDC, not only do red blood cells pick up CO faster than they do oxygen, but if there is a lot of CO in the air the body may replace oxygen in the blood with the CO. If you are at home and think you and your family might be experiencing CO poisoning, getting oxygen back into your bloodstream as soon as possible is important. Do not wait for medical help to arrive to get outside.

“The mainstay of treatment is getting away from the carbon monoxide. Get outside and get far away from the house or building that you’re in. Take some nice, big deep breaths of oxygen. What they would do at the hospital is put oxygen on. So getting away from the exposure and taking some deep breaths of regular air would be helpful,” Petoskey says.

Stay safe this winter. Leave your home immediately and call 911 if your CO detector goes off, whether or not you or someone in your household is experiencing signs of CO poisoning. Don’t assume it is a fluke. On the other hand, if someone is exhibiting signs of CO poisoning but your detector has not gone off, err on the side of caution and call 911 anyway. In either case, stay outside until you have been evaluated by a medical professional and your home has been deemed safe for you to reenter.