

# Tool Box Talk

## Carbon Monoxide

### What is Carbon Monoxide?

It is a gas that has no smell, taste or colour that can cause illness and lead to death. It is produced from burning fuels such as coal, gasoline, natural gas, oil, propane, wood products or even second-hand smoke. It is lighter than air and therefore moves freely throughout a building. In the winter months, we are at a much higher risk of exposure due to heating our homes and facilities.

### What Is Carbon Monoxide Poisoning?

Exposure to carbon monoxide can lead to poisoning. The length of time to get carbon monoxide poisoning depends on the concentration of carbon monoxide in the air. Breathing this gas reduces your body's ability to carry oxygen in your blood. When too much carbon monoxide is in the air, the body replaces the oxygen in the red blood cells with carbon monoxide. This can lead to serious tissue damage or even death. The organs that are most sensitive and likely to be affected are the brain and the heart.

### Symptoms at Low Levels

- Feeling flu-like, tiredness, headaches
- Shortness of breath
- Muscle weakness or function loss of a body part

### Symptoms at Increased Levels or Low Levels for Longer Periods

- Dizziness
- Chest pain
- Poor vision and difficulty thinking

### Symptoms at High Levels

- Convulsions or loss of consciousness
- Coma
- Death

For mild poisoning, symptoms may reduce when moving to fresh air or breathing pure oxygen through a mask. It could take up to 24 hours to leave your body.

For severe exposure, you may require hyperbaric oxygen treatment. This involves breathing pure oxygen in a chamber for a set amount of time. The air pressure is increased 2 to 3 times higher than normal air pressure.

### Prevent Carbon Monoxide Poisoning

- Ensure all appliances and equipment burning fuels are installed, maintained, inspected and used correctly. This includes furnaces, fireplaces, stoves, water heaters, dryers, refrigerators, kerosene or oil space heaters and lamps, portable fuel-burning camping equipment, barbeques, etc.
- Do not smoke indoors.
- Do not idle vehicles or equipment in the garage. Continual inspections are very important and ensure to check exhaust vents during and after snowstorms.
- Ensure horizontal pipes are slightly elevated towards the outside which can prevent leaks in the case that pipes are not properly fitted.
- Do not attempt to patch pipes with tape, gum or glue.
- Never use a gas range or oven to heat indoors as this can cause a buildup of carbon monoxide.
- Never use a generator inside your home, basement or garage and ensure it is operated more than 20 ft away from any indoor air supply.

### Carbon Monoxide Alarms

This gas can only be detected with a carbon monoxide alarm. All homes and facilities should have them. It is recommended to have a detector on every floor, including the basement. They should be located within 10 feet of each bedroom door and there should be one near or over any attached garage. They can be purchased at any hardware store. Ensure the alarm is certified to Canadian safety standards.

### Carbon Monoxide Emergency Response

If your carbon monoxide alarm is alerting you to a potential emergency or you suspect there may be an emergency, remain calm and follow these steps:

1. Leave the building and go outside for fresh air
2. Call 911
3. Do not re-enter the building until responders say it is safe to do so

References: <https://www.canada.ca/.../keep-carbon-monoxide-out-your-home.html>

<https://www.canada.ca/content/dam/hc-sc/documents/services/publications/healthy-living/infographic-improve-indoor-air-quality/infographic-improve-indoor-air-quality.pdf>