

Ensure Safe Use of Portable Heaters to Protect Workers from CO Poisoning



During the cold weather, employers have a duty to take reasonable steps to protect workers from cold stress. One such step may be the use of portable heaters. But if these heaters aren't used properly, they can endanger workers and expose them to the risk of carbon monoxide (CO) poisoning.

In fact, WorkSafeBC recently issued a hazard alert on three construction workers who had to be treated for CO poisoning as the result of the improper use of a gas-powered heater.

They were using the heater to warm a building that was under construction. The heater was running on propane, but could also run on natural gas. Either type of gas could be connected to the heater by a hose. The correct gas-supply pressure (high for propane and lower for gas) could then be chosen by positioning a valve handle.

At the time of the incident, the valve handle wasn't locked into position as it should have been. It slipped from the propane position to the natural gas position, so the gas-supply pressure was too low. As a result, the propane didn't burn properly and the exhaust gases contained more carbon monoxide than normal. And the heater wasn't set up to vent these gases outside. Carbon monoxide quickly reached hazardous levels inside the building, making the workers dizzy and

nauseous.

The manufacturer's instructions for the heater required the valve handle to be locked into position. The instructions also said that if the heater was used indoors, the exhaust gases must be vented to the outdoors. These instructions weren't followed.

To avoid similar incidents, WorkSafeBC recommends that you:

- Always install and use equipment according to the manufacturer's instructions. For example, vent gas-powered heaters as directed by the manufacturer to prevent exposure to carbon monoxide.
- Monitor the air to ensure that CO levels remain within occupational exposure limits.

In addition, you should make sure you comply with the portable heater requirements in the OHS regulations in your jurisdiction. For example, don't place space heaters by flammable or explosive materials.

And when workers are operating any equipment that could expose them to toxic gases, make sure they do so in properly ventilated spaces so the gases can't build up or require them to use appropriate respiratory protection.