



# TOWNSHIP OF MAHWAH FIRE PREVENTION BUREAU

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## Carbon Monoxide Safety

### Carbon Monoxide – Odorless, Colorless, Tasteless and Deadly!

#### What is Carbon Monoxide?

Carbon Monoxide (CO) is an odorless, colorless, tasteless gas formed from incomplete burning of flammable fuels such as natural gas, oil, wood, propane, coal, or kerosene.

#### Sources of Carbon Monoxide

CO is present whenever fuel is burned. Any appliance that uses wood, propane, gas, kerosene, or oil is a source of carbon monoxide. Malfunctioning appliances, cracked or blocked piping, and changes in pressure all can cause CO to build up in your home.

#### What Effects Does Carbon Monoxide Have?

The poisonous gas, CO, enters the lungs along with the air. Unfortunately, the blood component that carries the oxygen, hemoglobin, absorbs CO better than oxygen. So, eventually the heart and brain become oxygen starved. As the level of CO rises, the exposed person risks breathing difficulty, cardiac dysfunction, brain damage, coma and eventually death.

What actions do I take if my Carbon Monoxide alarm goes off?

This depends on whether anyone is feeling ill or not. Symptoms of CO are often confused with the flu.



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## These symptoms include:

- Nausea
- Fatigue
- Headache
- Dizziness
- Irritability
- Confusion
- Difficulty breathing

## If no one is feeling ill:

- Silence the alarm.
- Turn off all appliances and sources of combustion (i.e. furnace and fireplace).
- Ventilate the house with fresh air by opening doors and windows.
- Call a qualified professional to investigate the source of the possible CO buildup.

## If illness is a factor:

- Evacuate all occupants immediately.
- Determine how many occupants are ill and determine the symptoms.
- Call your local emergency number and when relaying information to the dispatcher, include the number of people feeling ill.
- Do not re-enter the home without the approval of a fire department representative.
- Call qualified professional to repair the source of the CO.

Also, watch for more the one family member with similar illnesses at the same time and illnesses that seem to improve when they are away from the house for a while.

Who is at risk of CO Poisoning?



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Everyone is at risk; however, pregnant women, babies, children, senior citizens and people with heart or lung problems are at the greatest risk.

What to do?

- Purchase and install Carbon Monoxide detectors outside sleeping areas and near flammable fuel burning appliances, per the manufacturers' instructions. Once installed, they need to be tested regularly (once a week for battery operated, once a month for electric).
- Have all your flammable fuel appliances serviced by a technician annually.
- Read the manufacturers manual and installation instructions – Follow their directions and keep the owners' manual for future reference.

## Things to Remember

When operating a furnace and a fireplace at the same time, it is recommended you open a window slightly to help equalize the pressure allowing the combustion gases to freely flow up and out the chimney.

A situation exists, more so in newer airtight homes, called "Down drafting." This develops when exhaust fans are on, such as in the bathroom or kitchen, and causes the air pressure in the house to be lower than the pressure outside. When this occurs, flue gases that would normally go up the flue and out are sucked back down the flue bringing the carbon monoxide into your home.

A similar situation occurs when you have two appliances (like a water heater and a furnace) in the same utility closet that is unvented or inadequately vented. However, this is called "reverse stacking." This happens when one appliance turns on and is unable to get adequate air. It then pulls the CO contaminated air down the other's exhaust and contaminates the house. If the appliance doing this is the furnace, it quickly spreads the CO throughout the house.

**When in doubt dial 9–1–1**



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## Potential Carbon Monoxide Sources in the home:

- Blocked Chimney Opening – birds and squirrels like to build nests in chimney tops.
- Clogged Chimney/Flue – build up of burnt by-products. Clean annually.
- Gas or Wood Burning Fireplace – adjust damper properly.
- Portable Heaters – be sure they are vented to the outside if they use flammable fuels.
- Gas or Oil Water Heater – Vent Pipes or malfunctioning combustion chamber.
- Furnaces – Leaking chimney pipe or flue. Damaged or malfunctioning combustion chamber.
- Gas Kitchen Range or Cooking Surface – Be sure they are properly vented.
- Gas Clothes Dryer – be sure vent is clear from dryer to outside. Keep lint catch clean.
- Vehicle Exhaust Fumes – especially from attached garage. But, any vehicle running near the house can cause dangerous fumes.
- Gas or Charcoal Grills – should never be used in-doors even if a door and or windows are open.