

# Carbon Monoxide (CO) The Invisible Killer





CO is an invisible and odorless gas emitted by fuel-burning products, including generators, gas appliances, water heaters, furnaces, charcoal grills, and engine-driven tools.



Generators produce hundreds of times more CO than cars.



More than 80 consumers die each year from CO poisoning caused by portable generators.

African Americans are at Higher Risk for Generator-related CO Death





Percent of Population

Percent of CO Deaths

## REPORT INCIDENTS to CPSC at: SaferProducts.gov (800) 638-2772

or (301) 595–7054 for people with hearing, speech, or language challenges

#### **CO Alarms Save Lives**



Install battery-operated CO alarms or CO alarms with battery backup in your home.

### Don't be a Victim of CO Poisoning!

**Follow These Safety Tips:** 





- Never operate a portable generator inside a home, garage, basement, crawlspace, shed or on a porch; and never leave a car running in an attached garage.
- Operate portable generators outside only, at least 20 feet away from the house, and direct the generator's exhaust away from the home and other buildings.
- Ask retailers for a portable generator with a safety feature to shut off automatically when high CO concentrations are present. Some models with CO shut-off also have reduced emissions.
- Never burn charcoal inside a home, garage, vehicle, or tent.









## Monóxido de Carbono (CO) El asesino silencioso





El CO es un gas invisible y sin olor producido por aparatos de combustión,

incluyendo plantas eléctricas (generadores portátiles), aparatos de gas, calentadores de agua, sistemas de calefacción, parrillas de carbón y herramientas con motor de gas.



Las plantas eléctricas generan cientos de veces más CO que los autos.



Más de 80 personas mueren cada año de intoxicación por CO causada por las plantas eléctricas.

Los afroamericanos corren un mayor riesgo de muerte por intoxicación por CO relacionada a las plantas eléctricas.





Porcentaje de la población

Porcentaje de las muertes por CO

## Reporte productos inseguros:

(800) 638–2772 (hablamos español) (301) 595–7054 (para personas con discapacidad auditiva y del habla)

## Las alarmas detectoras de CO salvan vidas



Instale alarmas de CO que funcionen con batería o que tengan baterías de respaldo.

¡No sea una victima de intoxicación por CO! Siga estos consejos de seguridad:





- Nunca opere una planta eléctrica dentro de una vivienda, garaje, sótano, espacios entre niveles, balcón o porche; y nunca deje un auto encendido dentro de un garaje adosado.
- Solo use una planta eléctrica en exteriores, a por lo menos 20 pies de distancia de la vivienda, y apunte el escape de gases hacia afuera, lejos de la casa y de otras edificaciones.
- Pregunte a los comerciantes si ofrecen plantas eléctricas con un sistema de seguridad de apagado automático debido a niveles altos de CO. Algunos modelos con sistemas de auto apagado también son de baja emisión de CO.
- Nunca queme carbón dentro de una vivienda, garaje, vehículo o tienda de campaña.









#### What to Know About

## Generators and Carbon Monoxide (CO)

CO is called the "INVISIBLE KILLER" because it is colorless and odorless and can kill in minutes. During power outages, many consumers use portable generators for power. More than 80 consumers die each year from CO poisoning caused by portable generators.

#### **African Americans are at Higher Risk** for Generator-related CO Death



Percent of Population



Percent of CO Deaths

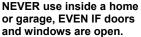
#### **A DANGER**

Using a generator indoors CAN KILL YOU IN MINUTES.

Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.











Only use OUTSIDE and far away from windows, doors, and vents.

#### CPSC Recommends Following These

#### **Portable Generator and CO Safety Tips:**

#### DO'S

- DO check that portable generators have had proper maintenance, and read and follow the labels, instructions, and warnings on the generator and in the owner's manual.
- DO operate portable generators outside only, at least 20 feet away from the house, and direct the generator's exhaust away from the home and other buildings.
- DO ask retailers for a portable generator with a safety feature to shut off automatically when high CO
  concentrations are present. Some models with CO shut-off also have reduced emissions.
- DO install battery-operated CO alarms or CO alarms with battery backup outside sleeping areas, and on each floor of your home. Test alarms monthly.
- DO know the symptoms of CO poisoning: headache, dizziness, weakness, nausea, vomiting, sleepiness, and confusion. If CO poisoning is suspected, get outside immediately, then call 911.
- DO be a good neighbor. Check on neighbors during extended power outages.

#### **DON'TS**

- DON'T operate a portable generator inside a home, garage, basement, crawlspace, shed or on a porch; and never leave a car running in an attached garage.
- · DON'T use a portable generator near openings to your home including doors, windows or vents.
- DON'T ignore a CO alarm when it sounds. Get outside immediately, then call 911.

#### What should you do?

Proper installation, operation, and maintenance of fuel-burning appliances in the home is the most important factor in reducing the risk of CO poisoning.

Make sure appliances are installed according to the manufacturer's instructions and the local codes. Most appliances should be installed by professionals.

Always follow the appliance manufacturer's directions for safe operation.

Have the heating system (including chimneys and vents) inspected and serviced annually by a trained service technician.

Examine vents and chimneys regularly for improper connections, visible cracks, rust or stains.

Look for problems that could indicate improper appliance operations:

- Decreased hot water supply
- Furnace unable to heat house or runs continuously
- Sooting, especially on appliances and vents
- Unfamiliar, or burning odor
- Increased moisture inside of windows

Operate portable generators outdoors and away from open doors, windows, and vents that could allow CO to come indoors.

In addition, install battery-operated CO alarms or plug-in CO alarms with battery back-up in your home. Every home should have a CO alarm in the hallway near the bedrooms in each separate sleeping area. The CO alarms should be certified to the requirements of the most recent UL, IAS, or CSA standard for CO alarms. Test your CO alarms frequently and replace dead batteries. A CO alarm can provide added protection, but is no substitute for proper installation, use and upkeep of appliances that are potential CO sources.

#### **Symptoms of CO poisoning**

The initial symptoms of CO poisoning are similar to the flu (but without the fever) They include:

- Headache
- Fatigue
- Shortness of breath
- Nausea
- Dizziness

If you suspect that you are experiencing CO poisoning, get fresh air immediately. Leave the home and call for assistance from a neighbor's home. You could lose consciousness and die from CO poisoning if you stay in the home.

Get medical attention immediately and inform medical staff that CO poisoning is suspected. Call the Fire Department to determine when it is safe to reenter the home.



To report a dangerous product or a product related injury, call CPSC's hotline at (800) 638-2772 or CPSC teletypewriter at (800) 638-8270. Consumers can obtain recall information at CPSC's web site at http://www.cpsc.gov. Consumers can report product hazards to info@cpsc.gov.

U.S. Consumer Product Safety Commission Washington, DC 20207



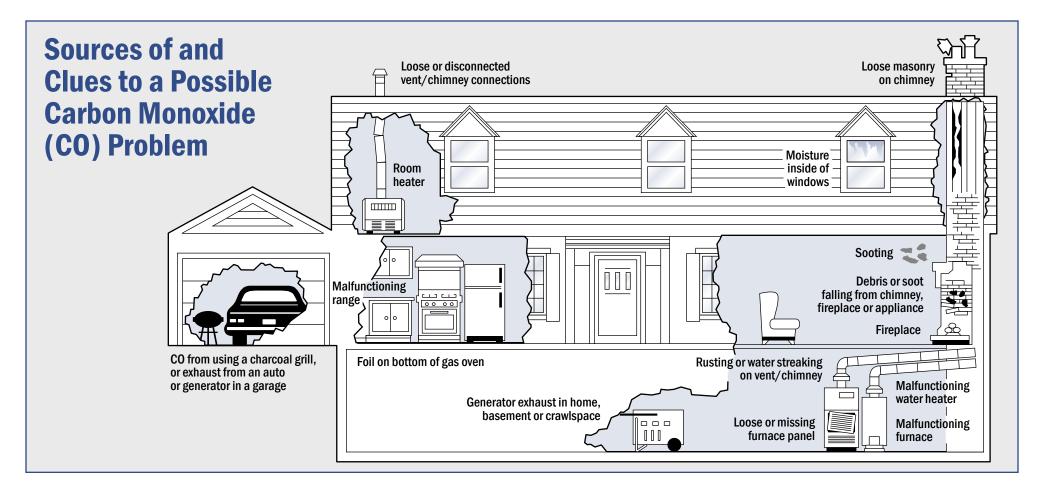
Carbon Monoxide (CO) is the "invisible" killer. Carbon monoxide is a colorless and odorless gas. Every year more than 100 people in the United States die from unintentional exposure to carbon monoxide associated with consumer products.

#### What is carbon monoxide?

Carbon monoxide is produced by burning fuel. Therefore, any fuel-burning appliance in your home is a potential CO source.

When cooking or heating appliances are kept in good working order, they produce little CO. Improperly operating appliances can produce fatal CO concentrations in your home.

Running a car or generator in an attached garage can cause fatal CO poisoning in the home. So can running a generator or burning charcoal in the basement, crawlspace, or living area of the home.



#### Carbon monoxide clues you can see...

- Rusting or water streaking on vent/chimney
- Loose or missing furnace panel
- Sooting
- Debris or soot falling from chimney, fireplace, or appliances
- Loose or disconnected vent/chimney, fireplace or appliance
- Loose masonry on chimney
- Moisture inside of windows

#### Carbon monoxide clues you cannot see...

• Internal appliance damage or malfunctioning components

- Improper burner adjustments
- Hidden blockage or damage in chimneys

Only a trained service technician can detect hidden problems and correct these conditions!

 CO poisoning symptoms have been experienced when you are home, but they lessen or disappear when you are away from home.

#### Warnings...

- Never leave a car running in a garage even with the garage door open.
- Never run a generator in the home, garage, or crawlspace. Opening doors and windows or

- using fans will NOT prevent CO build-up in the home. When running a generator outdoors, keep it away from open windows and doors.
- Never burn charcoal in homes, tents, vehicles, or garages.
- Never install or service combustion appliances without proper knowledge, skills, and tools.
- Never use a gas range, oven, or dryer for heating.
- Never put foil on bottom of a gas oven because it interferes with combustion.
- Never operate an unvented gas-burning appliance in a closed room or in a room in which you are sleeping.