

WITHOUT WARNING:

# HOW EVERYDAY APPLIANCES BECOME DEADLY THREATS

A White Paper Presented By:



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A silent danger lurks in virtually every home across America. You can't see it, smell it, taste it or otherwise detect it with your senses. Yet it has the power to kill you in a matter of minutes.

Carbon monoxide poisoning kills hundreds of Americans every year.<sup>1</sup> This deadly gas is a byproduct of numerous everyday appliances. When properly manufactured, vented and maintained, these appliances pose no threat. Yet when something goes wrong – often without any warning – the consequences can be fatal.

## WHAT IS **Carbon Monoxide?**

Carbon monoxide (CO) is a colorless, odorless gas. It's highly toxic to humans in all but the smallest concentrations.<sup>2</sup> Any appliance that's fueled by gas, oil, kerosene or wood can produce CO.

## **SOURCES OF CARBON MONOXIDE**

### **EVERYDAY APPLIANCES:**

- Furnaces
- Water heaters
- Space heaters
- Room heaters
- Gas dryers
- Pool heaters
- Gas generators
- Gas ranges/ovens
- Camp stoves
- Fireplaces
- Grills
- Wood-burning stoves

### **INDUSTRIAL SOURCES:**

- Commercial pool equipment
- Forklifts
- Heaters, boilers and furnaces
- Generators
- Faulty venting
- Combustion engines
- Gas-powered tools

HOW DOES

# CO Poisoning Happen?

When properly vented, CO poses little threat. However, concentrations can swiftly rise to deadly levels when the gas becomes trapped in an enclosed space – for example, when a car is left idling in a closed garage.

Indoor appliances are often the culprits. Problems with ventilation can cause CO to disperse throughout the home or worksite, unbeknownst to occupants. Persistent low to moderate levels of CO over time can cause cognitive dysfunction without people knowing of the cause of the problem.

In some situations, outdoor appliances can also cause a deadly buildup of CO. For example, strong winds may cause fumes from a mobile home's gas generator to fill up the home.

## A DEADLY EQUATION:



# THE DEVASTATING EFFECTS OF CO On The Human Body

Humans need oxygen to survive.

Hemoglobin – a molecule in red blood cells – carries oxygen from the lungs to cells throughout the body.

When carbon monoxide is inhaled, however, it binds to hemoglobin molecules far more easily than oxygen. It also interferes with certain proteins in the heart, causing cardiac problems. Deprived of oxygen, vital organs (including the heart and brain) eventually shut down.<sup>3</sup>

## SYMPTOMS OF CARBON MONOXIDE POISONING

- ✓ Dizziness
- ✓ Confusion
- ✓ Disorientation
- ✓ Fatigue
- ✓ Muscle weakness
- ✓ Vomiting
- ✓ Nausea
- ✓ Headache
- ✓ Chest pain
- ✓ Loss of consciousness

### CASE EXAMPLE: DEFECTIVE AIR INTAKE FOR GAS-FIRED POOL HEATER

*Our firm handled a CO poisoning case involving the tragic death of a college student. While home for the summer, she slept in a spare bedroom above the family's gas-fired pool heating system. A design defect in the heater caused the air intake filter to dislodge and obstruct the air flow of the heater, producing lethal levels of CO in the bedroom.*

*An investigation revealed that the pool maintenance company and manufacturer of the heating system were responsible. As a result, our team obtained a substantial confidential settlement on behalf of the young woman's family.*

Exposure to toxic levels of CO can happen gradually or suddenly. In high concentrations, CO poisoning can happen so fast that the victim loses consciousness within minutes. Chronic low-level exposure can produce subtle cognitive impairment over time.

In either case, exposure can lead to brain damage, cardiac arrest, coma and death. <sup>4</sup>

## WHAT TREATMENTS ARE AVAILABLE?

There's only one way to halt the damaging effects of CO poisoning: immediate removal from the toxin. Oxygen therapy in a hospital setting is often essential for restoring oxygenation to damaged tissues. Depending on the level of exposure, the victim may need to spend time in a hyperbaric chamber.

### CASE EXAMPLE:

#### **POORLY MAINTAINED WALL HEATER PRODUCED INTERMITTENT CO LEAKS**

*A Monterey couple suffered CO poisoning from a dirty wall heater in their apartment. Each time the couple turned on the heater, they were exposed to harmful levels of CO gas. After several months, the husband had severe headaches with nausea. While at the Emergency Department, blood tests revealed elevated CO concentration in his blood stream. His wife was later tested and also discovered to have elevated carboxyhemoglobin levels. Our firm obtained an \$850,000 settlement on behalf of the couple.*

## HOW CARBON MONOXIDE POISONING ROBS

# Victims Of Their Future

The problem, however, is that CO poisoning often happens with little or no warning. Victims typically have already suffered irreversible brain damage by the time they realize something is wrong. They may lose consciousness without ever knowing what happened.

Survivors are often left with devastating health issues.<sup>5</sup> The heart may never function with the same efficiency, putting them at greater risk of cardiac arrest. They may suffer from incontinence and reproductive problems.

For these victims, life after CO poisoning looks very different from the future they once envisioned. They may not be able to care for themselves anymore, requiring an in-home health aide or round-the-clock attention at a nursing home. Those who are still able to live a semblance of a normal life may nonetheless be unable to work or enjoy the activities they once loved.

## MANY ARE LEFT WITH PERMANENT BRAIN DAMAGE, LEADING TO COMPLICATIONS SUCH AS:



Memory loss



Inability to concentrate



Impaired speech



Loss of mobility



Significant cognitive  
impairment



Parkinsonism (tremors  
and muscle stiffness)



Depression



Dementia



Personality changes



Persistent vegetative  
state (coma)

## WHO IS Responsible?

CO poisoning is almost always preventable. When it happens, it's often due to negligence. Any number of parties may be responsible, depending on how and where it happened. For example, victims may have a claim against:



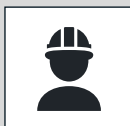
A product manufacturer for an appliance that had a problematic design, a manufacturing defect or inadequate warnings



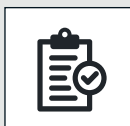
A landlord or property management company for failing to properly maintain appliances or for failing to install CO detectors



An HVAC contractor or other workers who performed negligent repairs on the appliance or ductwork




A builder or developer who failed to ensure that the home, condo or apartment building had proper ventilation



A hotel or other commercial property owner that failed to keep appliances such as pool heaters in safe condition

A thorough investigation – with the help of scientific experts – is often essential for getting to the bottom of what went wrong.



## FACTORS THAT COMMONLY CONTRIBUTE TO CARBON MONOXIDE POISONING:

- Improper venting
- Inadequate warnings
- Poor installation instructions
- Deteriorating or subpar materials
- Problematic design
- Defective safety features
- Negligent repairs and inspections



## VICTIMS MAY BE ENTITLED TO COMPENSATION FOR:


- Medical expenses
- Rehabilitation expenses
- Long-term care expenses
- Impaired earning capacity
- Loss of past and future earnings
- Loss of enjoyment in life
- Loss of companionship (in fatal cases)

### CASE EXAMPLE:

#### **UNPERMITTED CHANGES TO POOL HEATER RESULT IN CARBON MONOXIDE POISONING**

*Our firm obtained a \$13.5 million settlement against a property owner who made changes to an existing pool heater and ventilation system without obtaining a permit, in violation of local ordinances and building codes. A gentleman was exposed to high levels of CO on and off throughout the night. He was discovered unconscious the next morning and suffered typical residual symptoms, such as memory impairment, personality changes, headaches and concentration problems.*





## HOW CAN YOU Stay safe?

While CO poisoning frequently happens without any warning, you can still take steps to protect yourself and your loved ones. Installing CO detectors is one of the easiest ways to reduce your risk. Place them throughout your home, especially in sleeping areas and near fuel-burning appliances, and test them regularly.

You can also stay safe by ensuring that appliances are properly installed, vented and maintained.

*Many states now require mandatory installation of CO detectors. Our firm assisted in a client's efforts to change California law. Thanks to these efforts, CO detectors are now mandatory in all hotels, motels, residential rental property and new housing construction statewide. <sup>6</sup>*

### CASE EXAMPLE:

## LANDLORD RESPONSIBLE FOR TENANTS' CHRONIC CARBON MONOXIDE POISONING

*Our firm obtained a \$1 million settlement for a mother and son who suffered chronic low-level CO poisoning in the Oakland apartment they rented. The landlord failed to inspect, maintain and repair a gas-fired wall heater. As a result of chronic exposure, the son suffered irreversible brain damage.*

## TIPS FOR REDUCING THE RISK OF CARBON MONOXIDE POISONING



Install CO detectors throughout your home or property.



Take care to properly install fuel-burning appliances. If in doubt, hire a licensed professional to do it.



Read all warning labels and instructions when operating fuel-burning appliances.



Never use camp stoves, gas generators or other portable CO-producing devices indoors.



Regularly clean chimneys and wood-burning stoves.



Hire only licensed, reputable contractors to perform inspections and repairs.

## VICTIM OF Carbon Monoxide Poisoning?

For those unfortunate few who suffer from CO poisoning, life may never be the same again. Survivors often face countless medical difficulties and an uncertain future. Those who have lost loved ones must struggle to move forward with such a gaping hole in their lives.

Legal action can't undo the harm you have suffered, but it can bring you the financial resources you'll need on the difficult road ahead. By understanding your legal rights and options with the help of a qualified attorney, you can start paving the way toward a brighter future.

## SOURCES

<sup>1</sup>U.S. Centers for Disease Control and Prevention, "Carbon Monoxide Poisoning: Frequently Asked Questions," <https://www.cdc.gov/co/faqs.htm>.

<sup>2</sup>The National Institute for Occupational Safety and Health, "Carbon Monoxide: Immediately Dangerous to Life or Health Concentrations," [www.cdc.gov/niosh/idlh/630080.html](http://www.cdc.gov/niosh/idlh/630080.html).

<sup>3</sup>Christian Nordqvist, "Carbon Monoxide, the Silent Killer," Medical News Today (July 4, 2016), <http://www.medicalnewstoday.com/articles/171876.php>.

<sup>4</sup>Ibid.

<sup>5</sup>Davin K. Quinn, M.D. et al., "Complications of Carbon Monoxide Poisoning: Discussion and Review of the Literature," Primary Care Companion Journal of Clinical Psychiatry 11(2): 74 – 79 (2009), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2707118/>.

<sup>6</sup>See California Health & Safety Code sections 13260 et seq. – Carbon Monoxide Poisoning Prevention Act of 2010

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