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IOWA METHODIST HYPERBARIC CENTER

**CARBON MONOXIDE POISONING
FACTS YOU SHOULD KNOW**

• **WHAT IS CARBON MONOXIDE?**

Carbon monoxide (CO) is a colorless, odorless, tasteless, non-irritating deadly gas; a silent killer. Carbon monoxide is slightly lighter than air and quickly spreads throughout an entire house.

• **WHAT PRODUCES CARBON MONOXIDE?**

Carbon monoxide is produced when fossil fuel burns incompletely because of insufficient oxygen. When fuels such as gasoline, kerosene, natural gas, propane, coal, charcoal or wood are burned without enough oxygen, deadly CO gas is produced. In properly installed and maintained appliances, natural gas burns clean and produces only small amounts of carbon monoxide. Automobiles and furnaces are major sources of CO poisoning. Many CO incidents involving automobiles are the result of faulty exhaust systems. It is strongly recommended that you check your furnace annually. Hot water heaters also release low to high levels of CO if not properly maintained. Gas cooking stoves can release low levels of CO and should have an exhaust fan that vents outdoors. If you don't have an exhaust fan, use caution and crack open a window to allow fresh air into your home. Never operate gas heaters, generators or charcoal grills inside your home.

• **WHAT ARE THE SYMPTOMS OF CO POISONING?**

Symptoms are similar to the flu and include: headache, fatigue, nausea, dizziness, confusion, and irritability. BECAUSE THESE SYMPTOMS MIMIC SO MANY ILLNESSES, IT IS OFTEN MISDIAGNOSED. Significant neurological deficits, such as changes in thinking, concentration, recall abilities and short-term memory loss can result from exposure. Acute and chronic exposures can cause serious health effects. Infants and children seem to be more susceptible to CO poisoning because the effects correlate with body size and activity.

• **WHEN SHOULD YOU SUSPECT CO POISONING :**

- The entire family is sick at the same time, and/or a guest complains of feeling sick.
- Symptoms appear soon after gas appliances are turned on.
- Flu-like symptoms decrease while away from the house.
- Children complain of being more tired in school, trouble concentrating, grades dropping.
- Short-term memory problems, unexplained headaches, etc.
- Excess moisture on the interior of windows.

- **WHAT YOU SHOULD DO IF YOU ARE EXPOSED TO CO:**
 - Remove all family members and pets from the house immediately.
 - CALL 911 AND SEEK MEDICAL ATTENTION.
 - If you have had an exposure to carbon monoxide, health care professionals familiar with the treatment and follow-up of carbon monoxide poisoning should evaluate you.
 - Call your local gas company and get a qualified technician to check for carbon monoxide poisoning. Make sure all sources are checked.
 - Do not go back into your home until the CO level is zero. Open your windows and allow fresh air into your home.

- **WHY IS CARBON MONOXIDE SO DANGEROUS?**

When CO is inhaled, it bonds with hemoglobin (a substance in your red blood cells that carries oxygen to your body) displacing oxygen and forming carboxyhemoglobin (CoHb) resulting in a lack of oxygen to the body's cells and tissues. The brain and heart require large amounts of oxygen and quickly suffer from any oxygen shortage. Physical, non-reversible damage can occur. The attraction between CO and hemoglobin is approximately 200-250 times greater than the attraction between oxygen and hemoglobin. This makes even small amounts of carbon monoxide dangerous to the body's organs and tissues. Exposure to low levels of CO has been reported to cause long-term health-related side effects.

- **WON'T THE CO LEAVE THE BODY NATURALLY?**

The half-life of carboxyhemoglobin in fresh air is approximately 5-6 hours. Medical treatment, using high flow oxygen or being treated in a hyperbaric oxygen chamber is the treatment and standard of care. This can reduce CO damage, speed recovery, and reduce medical problems. It is recommended treatment begin as soon as possible. Hyperbaric treatment should be given within 6 hours of exposure or as soon as possible to decrease neurological side effects.

- **PREVENTION:**
 - Have gas appliances checked annually.
 - Buy a carbon monoxide detector with a digital display for your home. For a \$40-50 investment you can rest at night knowing your family will be safe.
 - Place the detector near your bedrooms. It will sound an alarm just like a smoke detector.
 - **Trust your detector.** If it's alarming, you probably have carbon monoxide in your home.

CAUTION: Do NOT leave your car running in an attached garage. This allows carbon monoxide to seep into your home causing you to have elevated levels of carbon monoxide 4-6 hours after you leave. **ALWAYS** back your car out of the garage to warm it up.

REMEMBER – WITHIN JUST A FEW MINUTES YOU CAN COLLAPSE AND DIE IF EXPOSED TO HIGH CONCENTRATIONS OF CARBON MONOXIDE. PROTECT YOUR FAMILY!

<p>For more information, call the Hyperbaric Center at Iowa Methodist Medical Center 515-241-5093</p>
