

Carbon Monoxide and Fire Safety Handout

The Division of Specialized Care for Children's (DSCC) top priority is the safety of our participants and their caregivers. Basic fire and carbon monoxide protection are key components of maintaining a safe home.

All Home Care participants must have a working smoke alarm, fire extinguisher, and carbon monoxide detector in their home. This handout gives helpful guidelines on the equipment necessary to protect your home from these preventable dangers.



911



**SPECIALIZED CARE
FOR CHILDREN**

Carbon Monoxide Alarms

What are the symptoms of carbon monoxide poisoning?

CO is often described as a silent killer. Symptoms are not always obvious, may take time to develop and can resemble those similar to the flu. They include:

- dull headache
- weakness
- dizziness
- nausea or vomiting
- shortness of breath

Prolonged exposure can result in the following:

- confusion
- blurred vision
- loss of consciousness
- permanent brain/heart damage
- fetal death or miscarriage in pregnant women

These later symptoms are especially dangerous because they may prevent the victim from seeking emergency assistance or removing themselves from exposure to CO. It is not uncommon for victims of CO poisoning to die in their sleep. For this reason, installation of CO alarms is **absolutely essential** to prevent accidental death.

If you or a loved one experience any of the symptoms listed above and have any reason to believe you have been exposed to CO, **seek fresh air immediately and call 911.**

What is carbon monoxide?

Carbon monoxide (CO) is a colorless and odorless gas that is produced by the combustion of certain substances, such as automotive gasoline or natural gas from a furnace. The gas is harmful to humans because it binds to our red blood cells and prevents the delivery of oxygen to our organs and tissue. Over 10,000 people per year seek medical attention for suspected carbon monoxide poisoning, and over 500 people per year die from prolonged exposure to the gas. However, carbon monoxide injuries and deaths are easily preventable when using a carbon monoxide detector.

Purchase and Placement of CO Detectors

As with smoke alarms, CO detectors should be certified by a recognized testing laboratory, such as UL. CO detectors with electrochemical sensors offer more reliable readings when temperatures and humidity fluctuate. Digital displays with peak CO-level memory readouts can best assist fire personnel in the event of a potential leak. Battery-powered or plug-in with battery backup are the preferred choices to protect against alarm failure in the event of a power outage.

Ideally, CO detectors should be placed on every level of the home. However, Illinois law requires that CO detectors be placed **within** 15 feet of sleeping areas. Most manufacturers recommend that detectors be installed at least 15 feet **away** from furnaces and other fuel burning appliances.

Maintenance

Make sure CO detectors are clean and kept free from obstructions. Many CO detectors will feature alarms that show low battery and/or end-of-life. Replace batteries per alarm or manufacturer recommendation. Replace the entire unit should the end-of-life indicator alarm.

Sources:

National Conference of State Legislatures: Carbon Monoxide Detector Requirements, Laws and Regulations (<http://www.ncsl.org/research/environment-and-natural-resources/carbon-monoxide-detectors-state-statutes.aspx>)

US Department of Housing and Urban Development: Carbon Monoxide (<https://www.hud.gov/sites/documents/OHHLHCFLYERCM.PDF>)

Kidde: Choosing a Carbon Monoxide Alarm (<https://www.kidde.com/home-safety/en/us/co-safety/choosing-a-carbon-monoxide-alarm/>)

Fire Extinguishers

Fire extinguishers provide an additional line of defense in preventing the spread of house fires. DSCC recommends participants and/or caregivers buy one per household. Here is what to consider when selecting the correct fire extinguisher for your home:

Choosing the Right Size

The NFPA recommends households have an extinguisher present on each floor. Fire extinguishers come in a variety of sizes. Heavier cylinders contain more extinguishing agent and are more expensive. Larger models (approximately 10 pounds or greater) should be kept in areas where a fire is more likely to spread unnoticed, such as a garage or workshop. Extinguishers 2 to 5 pounds should be kept in kitchens or laundry rooms. Smaller, single-use extinguishers, which are the size of an aerosol can, may be kept in a car. There are even heat-activated extinguishers that mount above stove tops.

Time for Replacement?

Fire extinguishers without plastic nozzles can be refilled at a price that is less than the cost of replacement. However, refillable fire extinguishers carry higher upfront costs. It is important to note that fire extinguishers can lose their effectiveness over time. The cylinder gradually loses pressure, which reduces the output of the extinguishing agent. All fire extinguishers should come equipped with an easy-to-read pressure gauge. When the gauge moves from green to red, then it is time to replace or refill the extinguisher. Some models are equipped with a battery, which will trigger an alarm when the extinguisher is below a pressure level safe for operating.

The PASS Technique

Many of us have likely heard of the acronym "PASS". It is used to describe the proper technique for extinguishing a fire. Here is a description of the steps:

Pull the pin on the fire extinguisher.

Aim at the base of the fire.

Squeeze the handle.

Sweep from side to side.

Some fire departments offer free fire extinguisher training. Contact your local municipality for more details.

Labels

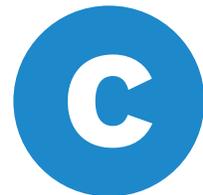
Fire extinguishers designed for residential uses are often labeled with A, B and C stickers.



"A" designated extinguishers are designed for common flammable materials like wood, paper, and/or cloth.



"B" labels cover flammable liquids like gasoline, oil-based paints, and/or cooking oil.



"C" labels show that the extinguisher is suitable for electrical fires.

Sources:

This Old House: How to Choose and Use Fire Extinguishers (<http://www.thisoldhouse.com/toh/article/0%2c%2c560725%2c00.html>)

FEMA: Choosing and Using Fire Extinguishers (<http://www.usfa.fema.gov/prevention/outreach/extinguishers.html>)

Smoke Alarms

How many alarms do I need? Where should I put them?

Smoke alarms are essential to minimizing property damage, injury and/or death in the event of a house fire. DSCC Home Care participants and their caregivers must install a smoke alarm on every level of their home. Please note that this requirement is the minimum. The National Fire Protection Association (NFPA) recommends installing smoke alarms in the following locations:

- Every room used for sleeping
- Areas outside sleeping rooms, such as hallways or staircases
- Near the ceiling at the bottom of basement staircases
- Living rooms/dens and staircases leading to upper levels
- At least 10 feet from any cooking appliances

Interconnected smoke alarms offer the best protection when alerting inhabitants to house fires. Smoke detection by one alarm in a series of interconnected alarms will cause the other alarms to sound. More recent building codes may require that new construction projects include the installation of hardwired smoke alarms with battery backup.

What kind of smoke alarm should I buy?

Participants and their caregivers should only buy smoke alarms labeled with a recognized testing laboratory, such as Underwriters Laboratories (UL). **Dual sensor smoke alarms** provide the best detection of smoke from both smoldering and flaming fires. If dual sensor alarms are not available, the participant or caregiver should purchase a combination of ionization and photoelectric alarms.

Maintenance

Smoke alarms should be kept clean and free from obstructions. Smoke alarms may have either a replaceable or non-replaceable battery. If you have alarms with replaceable batteries, change the batteries every year or when the low-battery alarm sounds. Alarms with non-replaceable batteries will often last approximately 10 years. These alarms should trigger a low-battery alert near the end of their useable life and require replacement. This will show that the entire smoke alarm needs replaced.

Source: National Fire Protection Association: Installing and maintaining smoke alarms (<https://www.nfpa.org/Public-Education/By-topic/Smoke-alarms/Installing-and-maintaining-smoke-alarms>)

Please note this information is general guidelines for the use and maintenance of this equipment. Refer to the manufacturer instructions for more detailed information specific to the model you have purchased.