

HOME HEATING SAFETY BRIEF

LOSSES

The U.S. Product Safety Commission (CPSC) estimates that each year at least 25,000 fires are caused by problems in residential fireplaces and over 230 people die due to the release of carbon monoxide from home heating equipment. Navy and Marine Corps losses involving carbon monoxide poisoning for FY 91 through 95 include 3 fatalities.

BACKGROUND

A variety of factors contribute to heating mishaps. Blocked chimney flues trap carbon monoxide is a colorless, odorless toxic gas and can easily enter the home through faulty furnaces or gas fired room heaters of inside.

Symptoms of carbon monoxide poison are similar to those of flu-like illnesses and include dizziness, fatigue, headaches, nausea and irregular breathing.

EXAMPLES

The following examples are typical mishap reports received at the Naval Safety Center:

- a. A SNM died in his bathroom from carbon monoxide poisoning. The gas space heater malfunctioned. He had a carbonoxymyoglobin level of 45 percent
- b. A CTI2 died from carbon monoxide poisoning from a butane gas space heater being used in his bedroom. The room had insufficient ventilation for this type of heater.
- c. A DP2 did not show up for work. Her shipmates went to her house and found her body slumped in the shower with the water running. She died from carbon monoxide

Poisoning from a propane hot water heater.

RECOMMENDATIONS

Identifying hazards such as improper installation, lack of maintenance, improper ventilation and combustible materials too close to home heating equipment are part of the carbon monoxide risk assessment and risk management process. Assessing the risks and making risk decisions to eliminate this silent killer include the following.

- a. Have a licensed contractor check for creosote buildup in your chimney, crumbling bricks, loose mortar and obstructions. If you're not experienced, don't rely on your own judgment. Also have the furnace electrical and mechanical components, thermostat controls and automatic safety devices checked before each heating season.
- b. Ensure the fireplace damper is open before a fire is lit. This will provide for efficient burning and prevent the accumulation of poisonous or explosive gases.
- c. To ensure adequate air circulation, leave a nearby window open about one inch. Wood burns incompletely, so its smoke contains many harmful pollutants, including carbon monoxide.
- d. Burn well-seasoned hardwoods such as maple, elm oak and birch. They are the safest and give the most efficient heat with the least amount of smoke and creosote buildup.
- e. Softwoods such as pine, fir and spruce should be used for kindling only. They burn slowly, producing excessive smoke and creosote. Decorative logs

add beauty; however when poked, they can explode or flare up.

f. Never burn salt-treated wood. It generates toxic gases.

g. Never burn trash. It can create a flash fire with tremendous updraft that can cause a fire in the chimney.

h. Never use charcoal as an indoor fuel; it produces toxic fumes.

i. Don't use flammable liquids to start a fire.

j. Keep furniture, rugs or other combustibles at least three feet from heaters. Use heat-tempered glass doors or a sturdy metal screen over the fireplace opening to keep sparks from popping out into the room.

k. Keep fires small, but steady and moderately hot. A small steady fire produces the best heat with the least smoke and creosote buildup.

l. Wear gloves and long sleeves when tending a fire.

m. Ensure the fire is out prior to retiring for the night. Be careful when putting the fire out or moving burnt materials. Allow ashes to cool before disposing of them in a tightly covered metal container. Don't mix ashes with trash and other combustibles.

n. Ensure an unvented, gas-fired Room heater has an automatic cut-off (trip over) switch. It should be equipped with an oxygen depletion sensor that shuts the heater off when there is not enough fresh air. Open windows enough to have an exchange of air. This prevents carbon monoxide build up. Note: Liquid-fueled heaters are illegal in Navy owned housing units.

o. Install smoke and gas detectors in your home and keep an all-purpose fire extinguisher near the fireplace.

SOURCES:

National fire Protection Association
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