



# Coffee Break Training - Fire Protection Series

## Inspection Techniques: Attention to Detail

No. FP-2011-45 November 8, 2011

**Learning Objective:** The student shall be able to explain the importance of looking closely for health, safety, and fire hazards during inspections.

Today's illustration should serve as a reminder to all inspectors of the need to pay attention to detail. In his/her haste to get an inspection done on time, the inspector inadvertently missed this dangerous condition of a disconnected exhaust vent from a natural gas appliance. If this hadn't been corrected, the heating system might have emitted carbon monoxide (CO) throughout the home.

CO is an odorless, colorless gas that can cause sudden illness and death. It is found in combustion fumes, such as those produced by gas ranges and heating systems, cars and trucks, small gasoline engines, stoves, lanterns, and burning charcoal and wood. CO from these sources can build up in enclosed or semi-enclosed spaces. People and animals in these spaces can be poisoned by breathing it.

All people and animals are at risk for CO poisoning. Certain groups—unborn babies, infants, and people with chronic heart disease, anemia, or respiratory problems—are more susceptible to its effects. Each year, more than 400 Americans die from unintentional CO poisoning, more than 20,000 visit the emergency room, and more than 4,000 are hospitalized due to CO poisoning.

The most common symptoms of CO poisoning are headache, dizziness, weakness, nausea, vomiting, chest pain, and confusion. High levels of CO inhalation can cause loss of consciousness and death. Unless suspected, CO poisoning can be difficult to diagnose because the symptoms mimic other illnesses. People who are sleeping or intoxicated can die from CO poisoning before ever experiencing symptoms.

Here are some simple safety tips:

- All gas appliances must be vented so that CO will not accumulate.
- Never burn anything in a stove or fireplace that isn't vented.
- Have the chimney and exhaust vents checked or cleaned every year. Chimneys can be blocked by debris causing CO to build up inside the building.
- Horizontal vent pipes to fuel appliances should not be perfectly level. Indoor vent pipes should incline slightly as they go toward outdoors. This helps prevent CO or other gases from leaking if the joints or pipes aren't fitted tightly.
- When purchasing or installing gas equipment, use only equipment carrying the seal of a national testing agency, such as the American Gas Association (AGA) or Underwriters Laboratories (UL).
- Install CO detectors and, for battery operated units, replace the battery in accordance with the manufacturer's recommendations.

For additional safety information, visit the Centers for Disease Control and Prevention (CDC) website at: [www.cdc.gov/co/faqs.htm](http://www.cdc.gov/co/faqs.htm)



The gap in this vent from a natural gas-fired home furnace would allow dangerous carbon monoxide to be released into the dwelling.



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