Carbon Monoxide Detectors

Considerations:

- 1. a digital display
- 2. look for UL symbol on packaging
- 3. outlet plug-in with a battery backup
- 4. buzzer (sound) alarm

Kidde KN-COPP-B

First Alert CO615

Kidde KN-COPP-3

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- 5. strobe light for vision impaired
- 6. Follow manufacture installation for detector placement

Consumer Search Recommendations

Symptoms of CO poisoning

- Mild exposure
 - \Rightarrow light headache
 - \Rightarrow nausea
 - \Rightarrow vomiting
 - \Rightarrow fatigue
- Medium exposure
 - \Rightarrow throbbing headache
 - \Rightarrow drowsiness
 - \Rightarrow confusion
 - \Rightarrow fast heart rate
- Extreme exposure
 - \Rightarrow unconsciousness

CO Concentration in AID

- $\Rightarrow \ \text{convulsions}$
- $\Rightarrow \ \ \text{cardio respiratory failure}$

Carbon Monoxide:

The Facts

What

Where

Why & How of CO?



Some Considerations



References

- * Center for Disease Control & Prevention
- * EPA: Protect your family & yourself from Carbon Monoxide Poisoning
- Brochure : The "Invisible" Killer
- * Consumer Research: Best CO Detectors

CO CONCENTIATION IN AIR	
Parts per Million	Effects
9 ppm	maximum allowable (short term)
35 ppm	maximum allowable (8 hr continu- ous)
200 ppm	slight headache, fatigue, nausea
400 ppm	frontal headaches 1-2 hours
800 ppm	dizziness, nausea, convulsions 45 minutes Death 2-3 hours
1,600 ppm	dizziness, nausea, convulsions 20 minutes Death 1 hour
3,200 ppm	dizziness, nausea, convulsions 5-10 minutes Death 30 minutes
6,400 ppm	dizziness, nausea, convulsions 1-2 minutes Death 10-15 minutes
12,800 ppm	Death 1-3 minutes

Suspect Carbon Monoxide Have Natural gas service Call 359-4016 24/7 On-call No natural gas service Call 911

What is Carbon Monoxide ?

CO is a

- colorless,
- odorless
- toxic (poisonous) gas.

How does CO affect the body?

When inhaled (breathed in) the body may replace oxygen with CO since red blood cells pick up CO quicker than oxygen.

Young children, elderly and pets are typically affected first.

When may a smell indicate CO?

When a sharp penetrating odor is present it is called aldehyde compounds which irritates the nose and the eyes.

Carbon monoxide is almost always present.

Remember carbon monoxide may be present without this aldehyde smell.

Prevention: How to avoid CO poisoning

DO

- Have your fuel-burning appliance inspected by trained professional at the beginning of heating season
- Choose appliances that vent their flumes to the outside whenever possible
- Be sure appliances are installed to manufacture specifications
- Read and follow all instructions, carefully following the cautions that come with the fuel-burning device

DO NOT

- Do not idle the car, truck in a garage
- Do not use a gas oven to heat your home
- Do not ever use a charcoal grill indoors
- Do not sleep in a room with an unvented space heater
- Do not use any gasoline powered engines such as mowers, weed trimmers, chain saws, generators in enclosed spaces
- Do not ignore any CO poisoning symptoms

How is CO formed?

Incomplete combustion of any hydrocarbon produces carbon monoxide

- Possible sources
 - \Rightarrow cars
 - \Rightarrow trucks
 - \Rightarrow small engines
 - \Rightarrow stoves
 - \Rightarrow lanterns
 - \Rightarrow burning charcoal
 - $\Rightarrow \ \text{burning wood}$
 - \Rightarrow gas ranges
 - \Rightarrow heating systems
 - \Rightarrow portable heaters

Where is CO found?

 CO can build up in enclosed or semi-closed spaces

Examples of spaces

- \Rightarrow garages
- \Rightarrow campers
- \Rightarrow basements
- \Rightarrow utility rooms
- \Rightarrow homes
- \Rightarrow workplace