



Opportunities'

- ?
- ?
- ?
- ?

ACTIVE or PASSIVE

Are You the Active or Passive Fire Safety Person?

- 1:15 PM to 2:45 PM
- BALLROOM 1
- If your idea of fire safety is as clear as mud you are not alone. The human has yet to learn that fire safety is a personal issue and responsibility; the human must take steps to understand and act on fire safety.
- During this session **open your mind and conviction to yourself** to the resources that are available to you **to become a knowledgeable passive or active person** in your quest for **personal fire safety**.

ACTIVE FIRE PROTECTION (AFP)

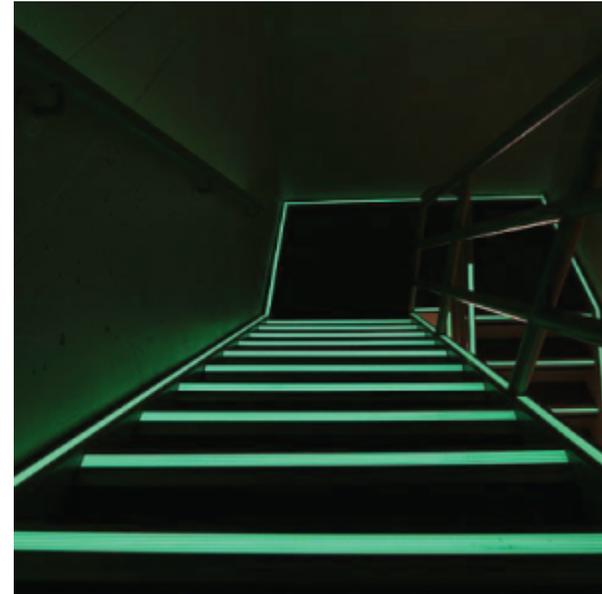
- Active Fire Protection (AFP) is a group of systems that require some amount of action or motion in order to work efficiently in the event of a fire. Actions may be manually operated, like a fire extinguisher or automatic, like a sprinkler, but either way they require some amount of action. AFP includes fire/smoke alarm systems, sprinkler systems, and fire extinguishers as well as firefighters. Fire/smoke alarm systems are used to detect whether there is fire and/or smoke in a building. Sprinkler systems are used to help slow the growth of the fire. Fire extinguishers and firefighters are used to help put out the fire altogether.

PASSIVE FIRE PROTECTION (PFP)

- Passive Fire Protection (PFP) is a group of systems that compartmentalize a building through the use of fire-resistance rated walls/floors. Compartmentalizing your building into smaller sections helps to slow or prevent the spread of fire/smoke from one room to the next. PFP helps to limit the amount of damage done to a building and provides its occupants more time for evacuation. PFP includes [fire/smoke dampers](#), [fire doors](#), and fire walls/floors. Dampers are used to prevent the spread of fire/smoke throughout the building through its ductwork. Fire doors help to compartmentalize a building. [Firestopping](#) helps to separate the building into compartments. [Photoluminescent egress path markers](#) help light the way to safety.

Photoluminescent Egress Path Marking Systems

Require no electrical power or maintenance and glow up to 48 hours in black out condition.
Non-toxic and radioactive, the perfect “Green” solution for your facility.



optimist





**HOUSE
FIRE**



**FATAL
FIRE**







- six adults and three children no older than five were killed in a blaze in a home in the community of Pikangikum, in Northwestern Ontario near the Mani
- "When homes go up in flames in these communities, the issue of poverty is very close behind," Mr. Day said. "Let's face it, this fire is a health issue. We need to ask were there standards, regulations and protocols with respect to prevention of house fires and loss of life? Obviously there wasn't."

- Homes are dilapidated, not built to comply with any modern code and often don't have running water, let alone a smoke detector. There are often several generations of families sharing a tiny bungalow, heightening the potential toll fires can take when they break out.

- "Most homes are simply a death trap," Mr. Day said.

Four killed, including two children,
in Ontario house fire



Four killed, including two children, in Ontario house fire

Fire officials say four people, two adults and two children, were killed after a fire ripped through a multiple-unit home in Oshawa.

The fire broke out at around 8:30 a.m. Monday at a three-storey home at Colbourne Street West and Centre Street North.

“It engulfed the whole house within minutes,” a neighbour told CityNews. “(I heard) yelling and screaming of ‘fire’ and ‘my child.’ ”

Fire Chief Derrick Clark said a man and a woman, along with a boy and a girl, died in the fire. It is not known if they were from the same family since there were multiple tenants in the building.

- **Fire killed a Hamilton man's family - but a \$30 smoke alarm could have saved their lives**







Pelican Narrows RCMP continue to investigate, after a fire destroyed house last week. Neighbours said it may have been sparked by children with a candle in the attic. (Courtesy of RCMP)

Solomon Ballantyne, 10, and his brother, Josiah Ballantyne, 9, died in the fire that also seriously injured a young girl.



A family struggles to rebuild after narrow escape from fire

Nora Henry said she heard the screams of her grandson, 22-year-old Johnny Seward, who tried to control the fire while Nora tried to wake everyone in the house. The entire family was able to escape through a door on the ground floor. Eleven people were taken to hospital suffering from smoke inhalation.

Four generations of a family are homeless and separated after fire ravaged their house on the Pauquachin First Nation in North Saanich.

Homeowners Russell and Nora Henry, who are in their 70s, were among the 16 people who fled the house at 8709 West Saanich Rd. when fire broke out at 2:48 a.m. on Feb. 6, 2014.



FIRST NATIONS

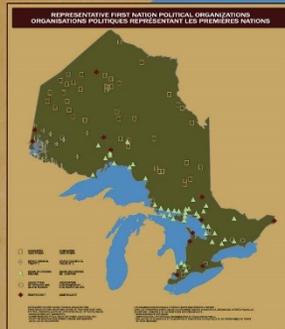
LES PREMIÈRES NATIONS



FIRST NATION COMMUNITIES

COLLECTIVITÉS DES PREMIÈRES NATIONS

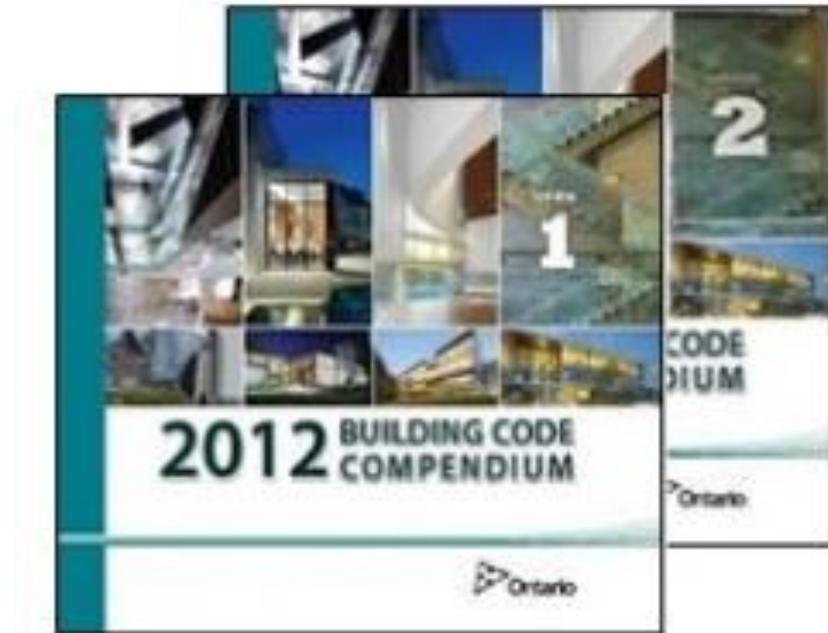
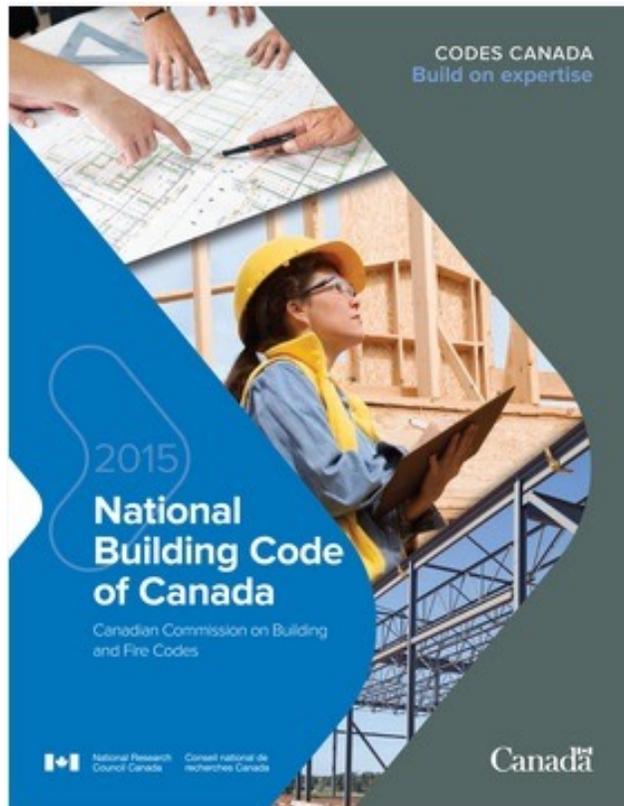
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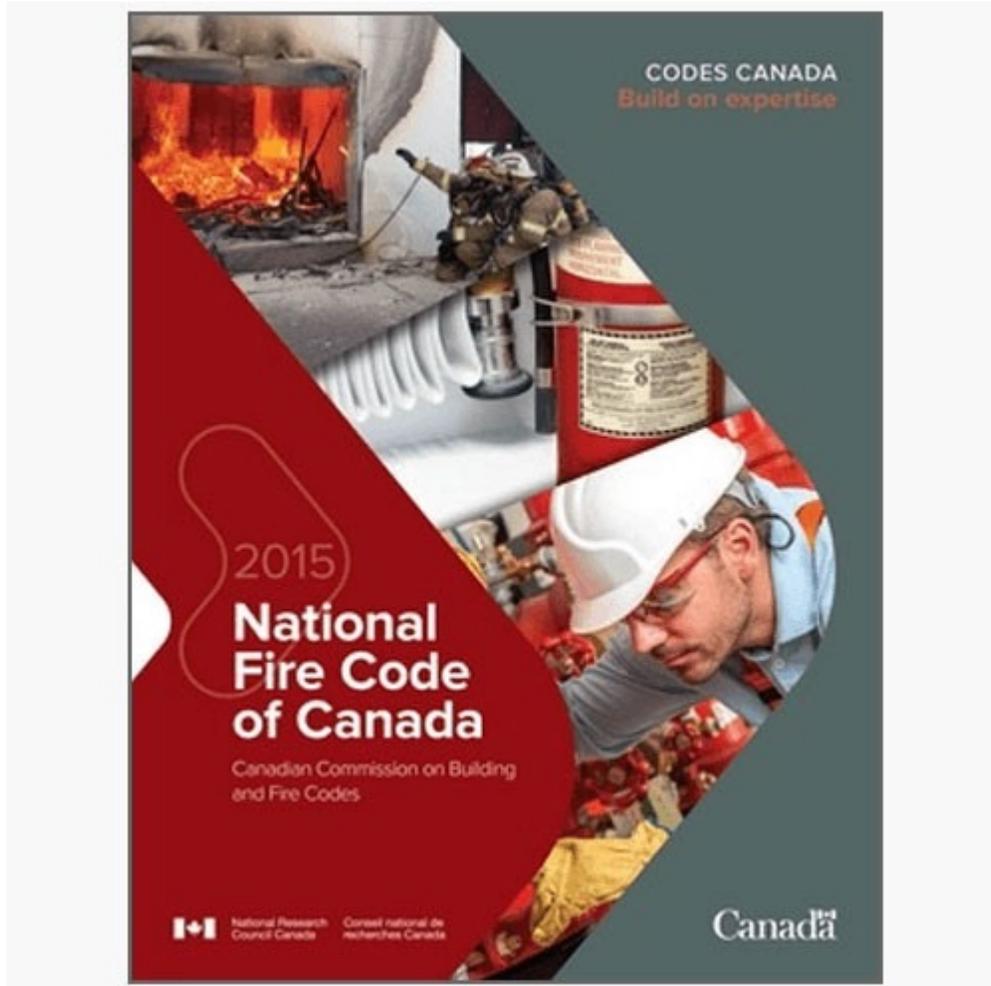
First Nation Name	Collectivité Name
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Building Code



Fire Code



GROUP C: RESIDENTIAL OCCUPANCIES - Houses

- **GROUP C**
- **RESIDENTIAL OCCUPANCIES:** means the occupancy by persons for whom sleeping accommodation is provided but who are not harboured or detained there to receive medical care or treatment or who are not involuntarily detained there. This Group does not have any Divisions.

GROUP C: RESIDENTIAL OCCUPANCIES - Houses

- Apartments
- Boarding Houses/Group Homes
- Clubs, Residential
- Colleges, Residential
- Convents
- Dormitories/Hostels
- Hotels
- **Houses**
- Lodging Houses
- Live/work units
- Monasteries
- Public Heritage Buildings
- Rectories
- Retirement Homes
- Rooming Houses
- Schools, Residential

The Seven Principles of Life Safety

The Ontario Fire Code is a provincial statute much like the Highway Traffic Act and Occupational Health and Safety Act. The Ontario Fire Code is based on the Seven Principles of Life Safety as listed below. How each principle impacts a building will depend on its occupancy type. Occupancies such as your single family dwelling would have minimal requirements under the Ontario Fire Code whereas occupancies such as a Hospital will have extensive requirements.

The OWNER is responsible for complying with the provisions of the Ontario Fire Code. The OWNER might be the person or corporation that physically owns the property or it might be the occupant of the property. Owner is determined when an inspection is completed on the property.

The Seven Principles of Life Safety

1. Means of Egress.

- Number of exits, locations of exits, access to exits, stairways, fire escapes, exit signs, lighting, interior finish, width of exits, door swing, obstructions, travel distances. These are all key factors in determining how quickly someone; or a crowd of people can safely exit a building (thus making means of egress important in building codes).

2. Construction.

- Prior to the 1930's all of the residential buildings were built with balloon framing (*for more information on balloon framed houses see the building construction thread*) This means that fire can spread easily in the walls. This issue, along with determining if the construction materials are consisting of combustibles or non-combustibles is important in life safety. (This will help you understand the fire ratings of the materials around you).

3. Fire Protection Systems.

-Anything that helps and/or aids in dampening a fire would fall into this category. Things like these include but are not limited to, sprinklers, extinguishers, standpipe systems and fixed extinguishment.

The Seven Principles of Life Safety

4. Fire Detection Systems.

-Anything that helps detect a fire before it gets out of control would fall into this category. Things like these include but are not limited to, smoke alarms, pull stations, annunciator panels, heat detectors and ancillary devices.

5. Building Services.

-Anything that services the building would fall into this category. This includes any ventilation, electrical, water supply, elevators and garbage chutes.

6. Interior Finish.

-This is determining how combustible the interior finish of the building is. An example is in a classroom. Classrooms are made up on concrete walls which are fire resistive. However, some teachers put up all of the class projects up all over the walls which causes fire spread quickly. There should be no more than 30% of the wall covered with paper in a classroom, and no paper put within two feet of the roof, and one meter from doorways.

7. Compartmentation.

-This is determining how well a fire can be confined. In this case, we put fire stops, magnetic doors and vents on certain types of rooms. Electrical rooms, chemical rooms, boiler rooms, elevator rooms, special shop rooms are all rooms where if a fire were to start, you would definitely want to keep that confined for as long as possible.

Fire Safety Inspection Report



**"I need as much fire insurance as I
can get by next Friday night."**

SAFETY INSPECTIONS

Learn More



Firefighters and the National Research Council say modern homes burn down faster





WARNING

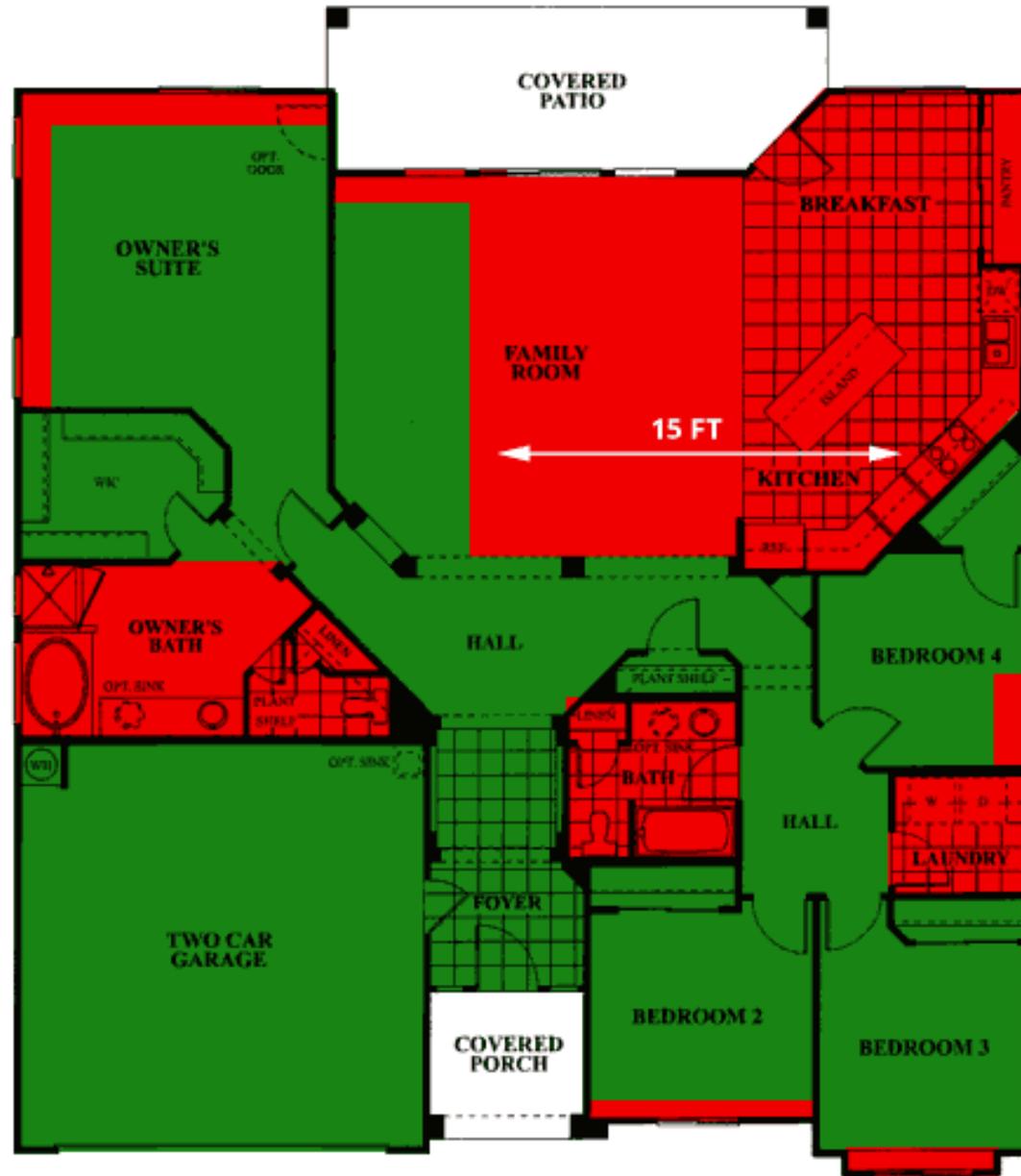
The house is combustible and may cause harm to anyone habituating it.

PROTECTIVE EQUIPMENT

THE FOLLOWING MUST BE
WORN IN THIS AREA

<input type="checkbox"/>		SAFETY GLASSES	<input type="checkbox"/>		HARD HAT	<input type="checkbox"/>		EAR PROTECTION
<input type="checkbox"/>		SPLASH GOGGLES	<input type="checkbox"/>		GLOVES	<input type="checkbox"/>		RESPIRATOR
<input type="checkbox"/>		FACE SHIELD	<input type="checkbox"/>		SAFETY SHOES	<input type="checkbox"/>		DUST MASK
<input type="checkbox"/>		PROTECTION SUIT	<input type="checkbox"/>		HIGH VIS VEST	<input type="checkbox"/>		
<input type="checkbox"/>		APRON	<input type="checkbox"/>			<input type="checkbox"/>		

(PLEASE CHECK OFF OR WRITE IN THE CORRECT PROTECTION TO WEAR)



OK TO INSTALL

AREAS TO AVOID



Residential

Smoke Alarm / Detector Locations

Smoke detector installation locations based on NEC, IBC, and NFPA

**At least one
Smoke Detector/ Alarm is
required on every level of your
home, including basements
and habitable attics.**



**Smoke alarm /
detector locations**

Some requirements for Smoke Alarm / Detector installations will vary between states and jurisdictions. Always check with your local fire and building departments for the most current requirements in your particular area.
You don't have a smoke detector? Isn't your life worth spending a few bucks and getting one now?

Carbon Monoxide Detector Locations

Residential

Based on NFPA - National Fire Protection Agency Guidelines



You need to have a Carbon Monoxide detector installed in your home if it relies on combustion of fossil fuels for heat, ventilation, hot water, cooking, or for any other purpose.

Fossil fuel examples:

- gasoline
- wood
- coal
- natural gas
- propane
- oil
- methane

You also need to have a CO detector if you have an attached garage.

Carbon Monoxide (CO) is a colorless, odorless, and tasteless gas. CO poisoning and death can occur when you are exposed to small amounts of CO over a longer period of time or by a significant amount of Carbon Monoxide over a shorter amount of time.

Carbon Monoxide Detector Locations

Residential

Based on NFPA - National Fire Protection Agency Guidelines



Each floor of the house, including basements and habitable attics

Near the entrance from the house to an attached garage

Inside the bedrooms located above an attached garage

Within 15 feet outside of each separate sleeping area

Recommended NO closer than 15-20 feet to any fossil fuel (such as gasoline, wood, coal, natural gas, propane, oil, and methane) burning appliance

CO detector locations

Carbon Monoxide (CO) is a colorless, odorless, and tasteless gas. CO poisoning and death can occur when you are exposed to small amounts of CO over a longer period of time or by a significant amount of Carbon Monoxide over a shorter amount of time.



Smoke & Carbon monoxide alarm required

Hallway

Smoke Alarms required

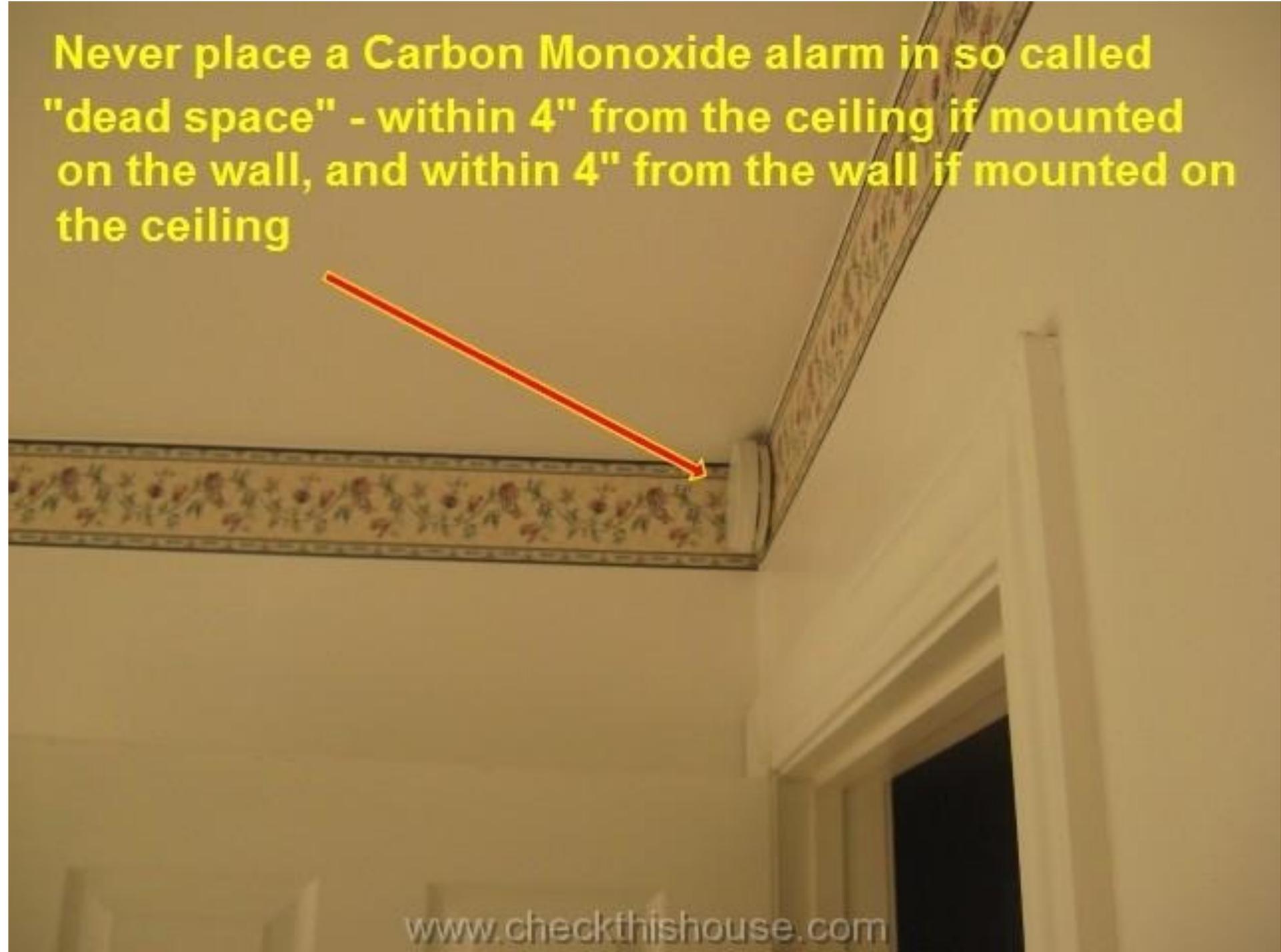
Bedroom

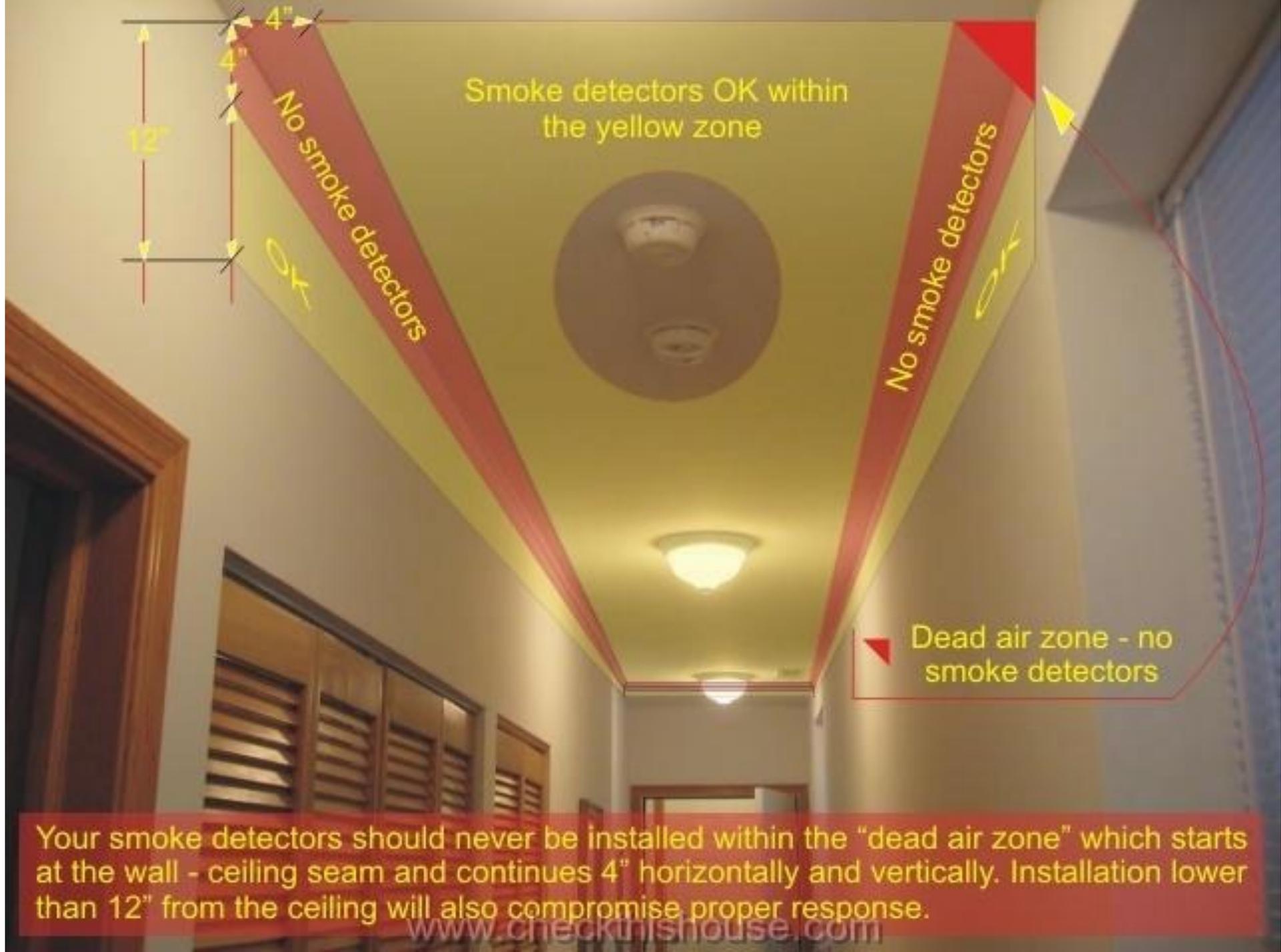
Bedroom

Avoid installing plugin type carbon monoxide alarms in areas easily accessible by children



Never place a Carbon Monoxide alarm in so called "dead space" - within 4" from the ceiling if mounted on the wall, and within 4" from the wall if mounted on the ceiling





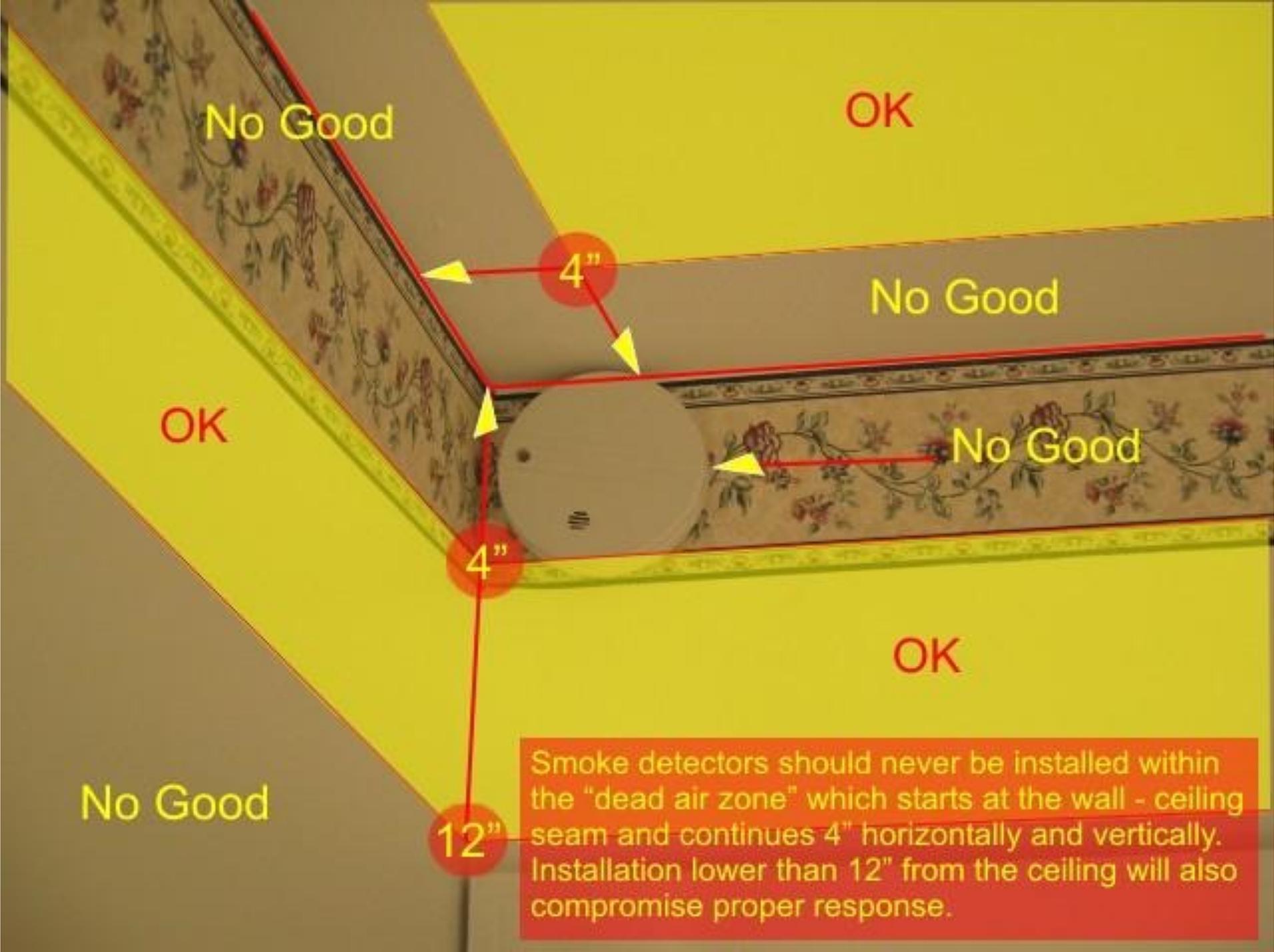
Smoke detectors OK within the yellow zone

No smoke detectors

No smoke detectors

Dead air zone - no smoke detectors

Your smoke detectors should never be installed within the "dead air zone" which starts at the wall - ceiling seam and continues 4" horizontally and vertically. Installation lower than 12" from the ceiling will also compromise proper response.



Smoke detectors should never be installed within the "dead air zone" which starts at the wall - ceiling seam and continues 4" horizontally and vertically. Installation lower than 12" from the ceiling will also compromise proper response.



Your smoke detectors should never be installed closer than 36" from the forced air AC / heating system air supply port. Also, they should not be installed between the bedroom and the air return port. With a single air return systems this might not be possible unless you install an individual smoke detector in each bedroom (not required in Chicago).

Kitchen

Between 10 ft. (3.0 m)
and 20 ft. (6.1 m)
from cooking appliance

Smoke alarm
or detector with
silencing means
or photoelectric
type

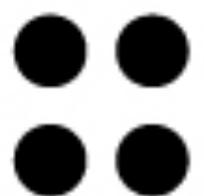
Bedroom

Area of
exclusion
No Smoke
alarm or
detector

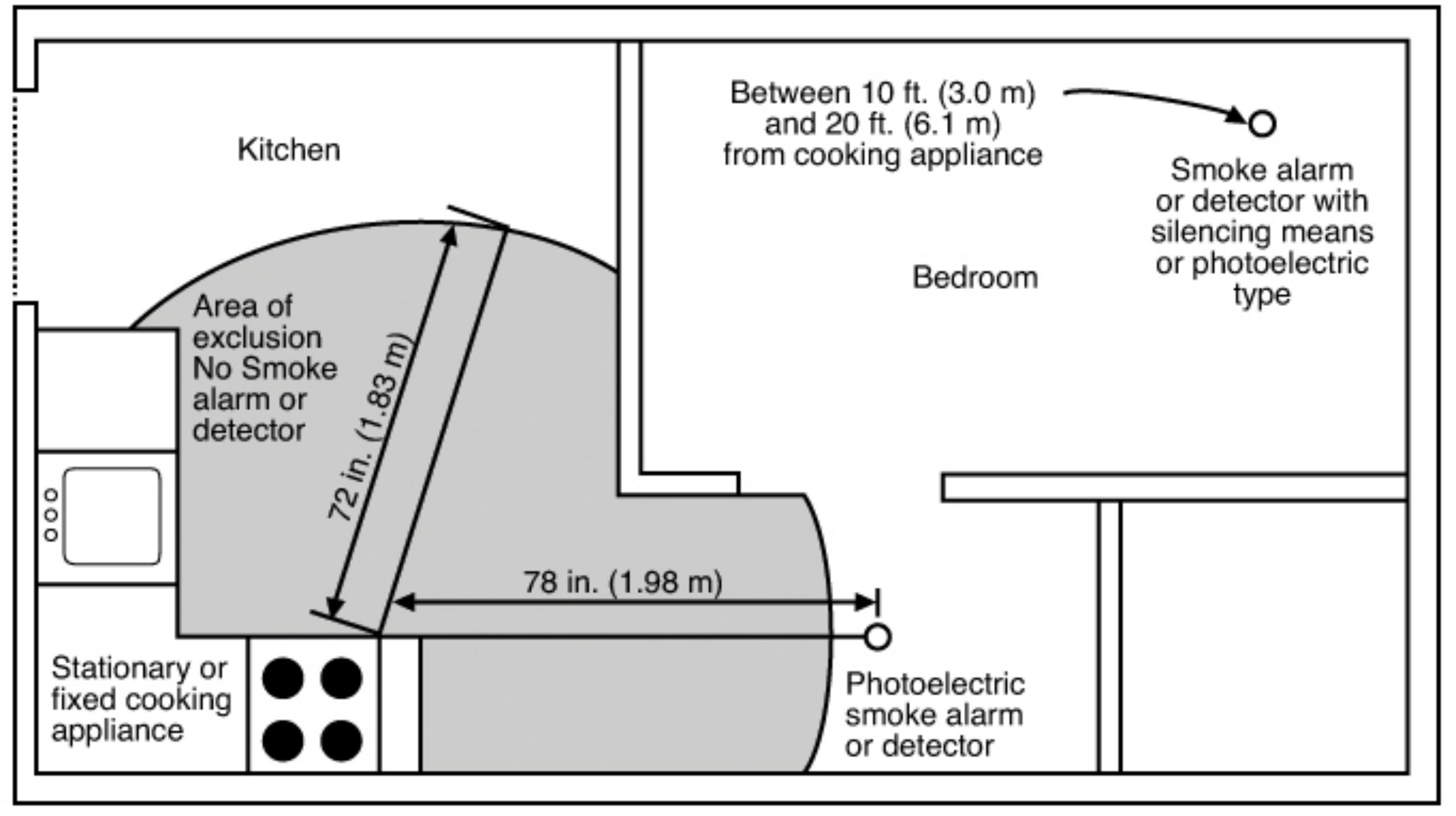
72 in. (1.83 m)

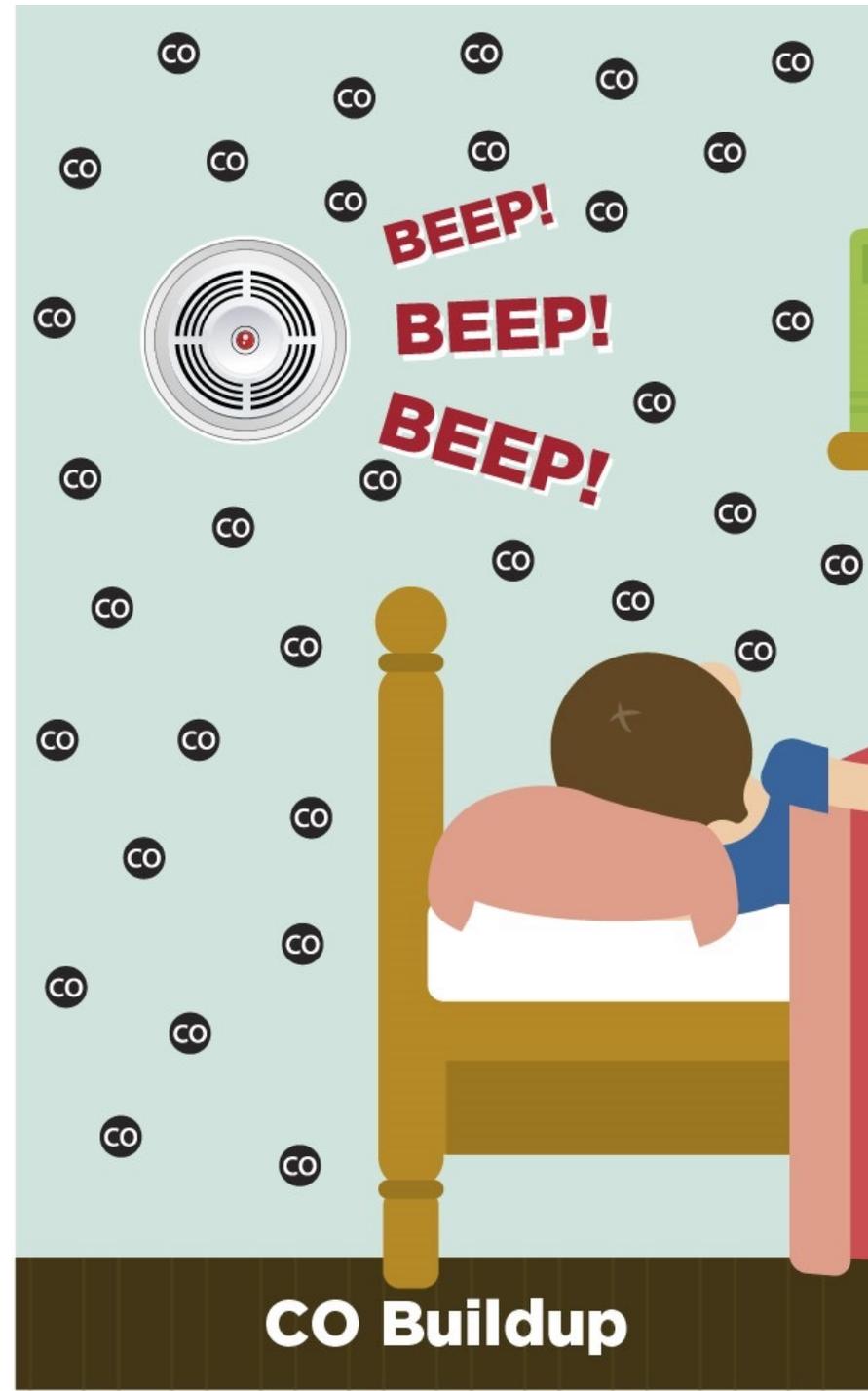
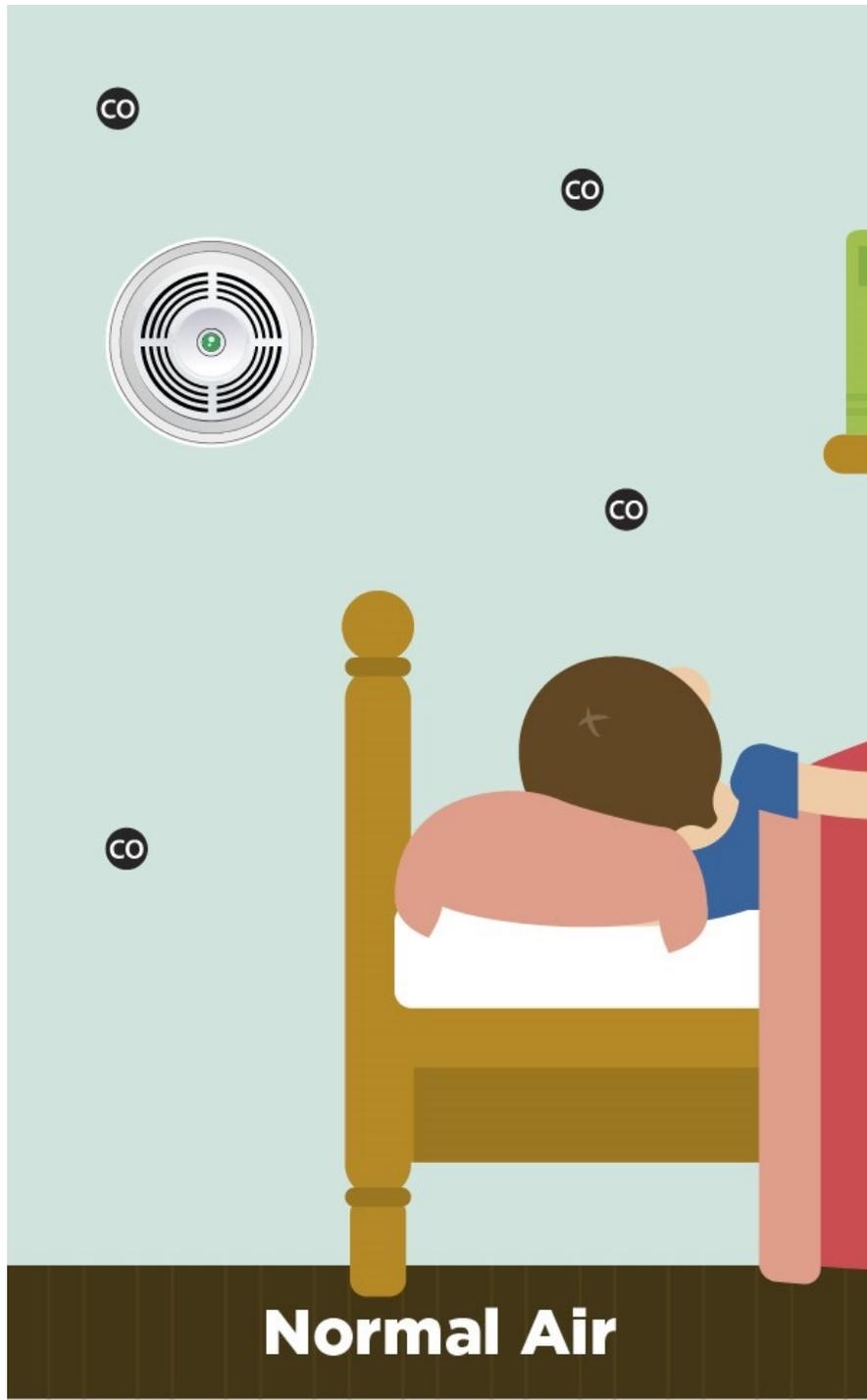
78 in. (1.98 m)

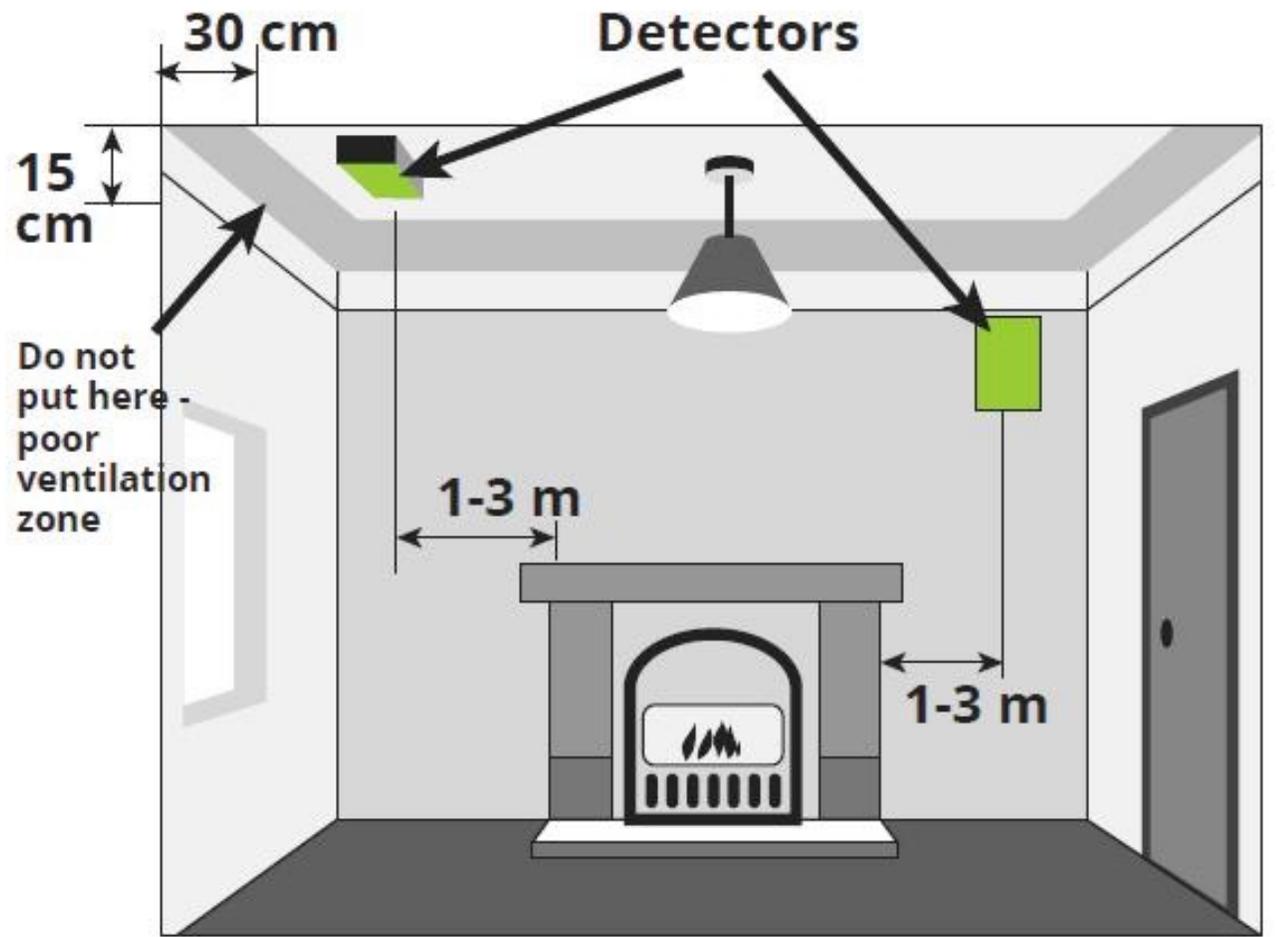
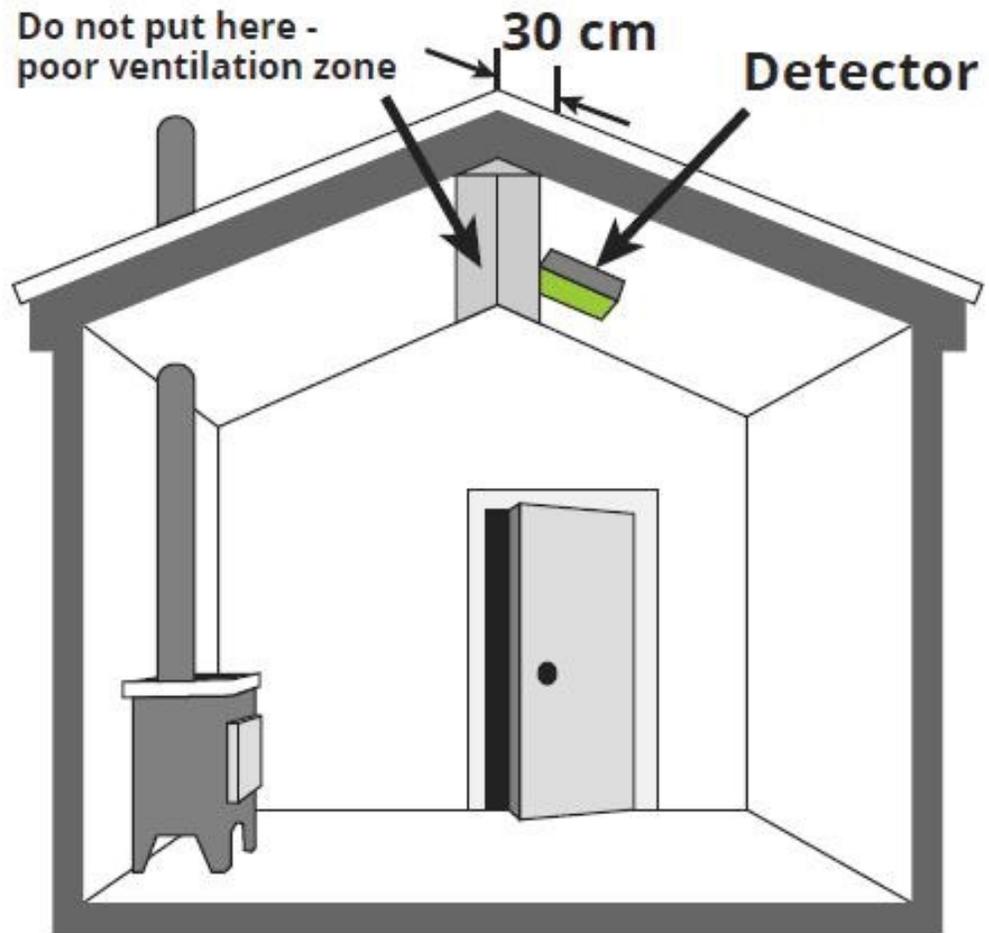
Stationary or
fixed cooking
appliance



Photoelectric
smoke alarm
or detector







exhaust gas leak

17 ppm CO



The carbon monoxide from a badly adjusted stove or range can kill you.



FLUE HQ

Keep the home fires burning but watch out for gas attacks



Make sure your stove or range cooker is professionally installed and regularly serviced.

Carbon Monoxide (CO) is a colourless, odourless, highly poisonous gas that can kill in minutes. Carbon Monoxide poisoning can be caused by ANY fuel that burns or smoulders.

CO-Awareness supports victims, their families and friends poisoned by Carbon Monoxide (CO) while trying to raise awareness among health professionals and the general public, of the dangers of CO.

www.COvidem.org
coawareness@covidem.org

Trust in us to help you understand the effects of Carbon Monoxide (CO) and other toxic products of combustion.

CO is the chemical formula for carbon monoxide.

CO-Awareness Week starts on the third Monday in November every year.



Watch out for the symptoms – • Headache • Dizziness •
• Nausea • Vomiting • Fatigue • Drowsiness • Confusion
• Difficulty breathing • Vision changes • Clumsiness •



CARBON MONOXIDE (CO) POISONING



**CAN'T BE
SEEN**



**CAN'T BE
SMELLED**

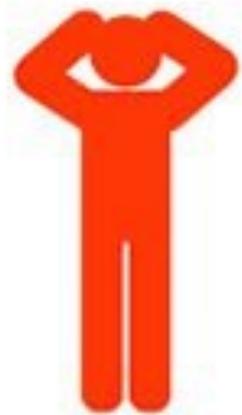


**CAN'T BE
HEARD**



**CAN BE
STOPPED**

Signs of carbon monoxide poisoning



Headaches



Nausea



Dizziness



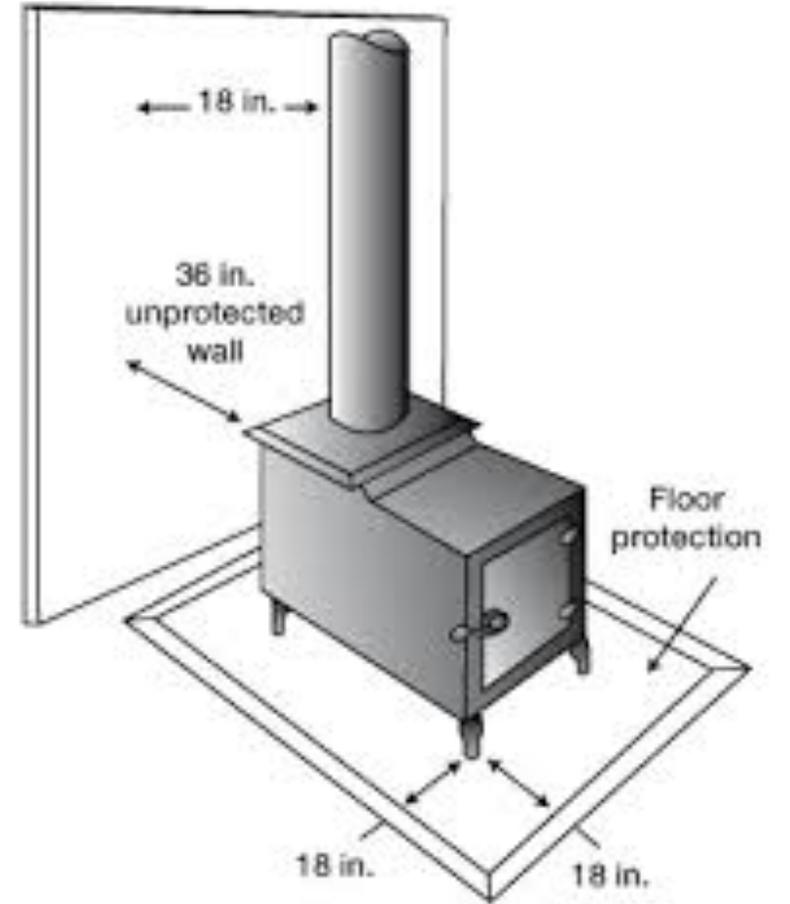
Breathlessness



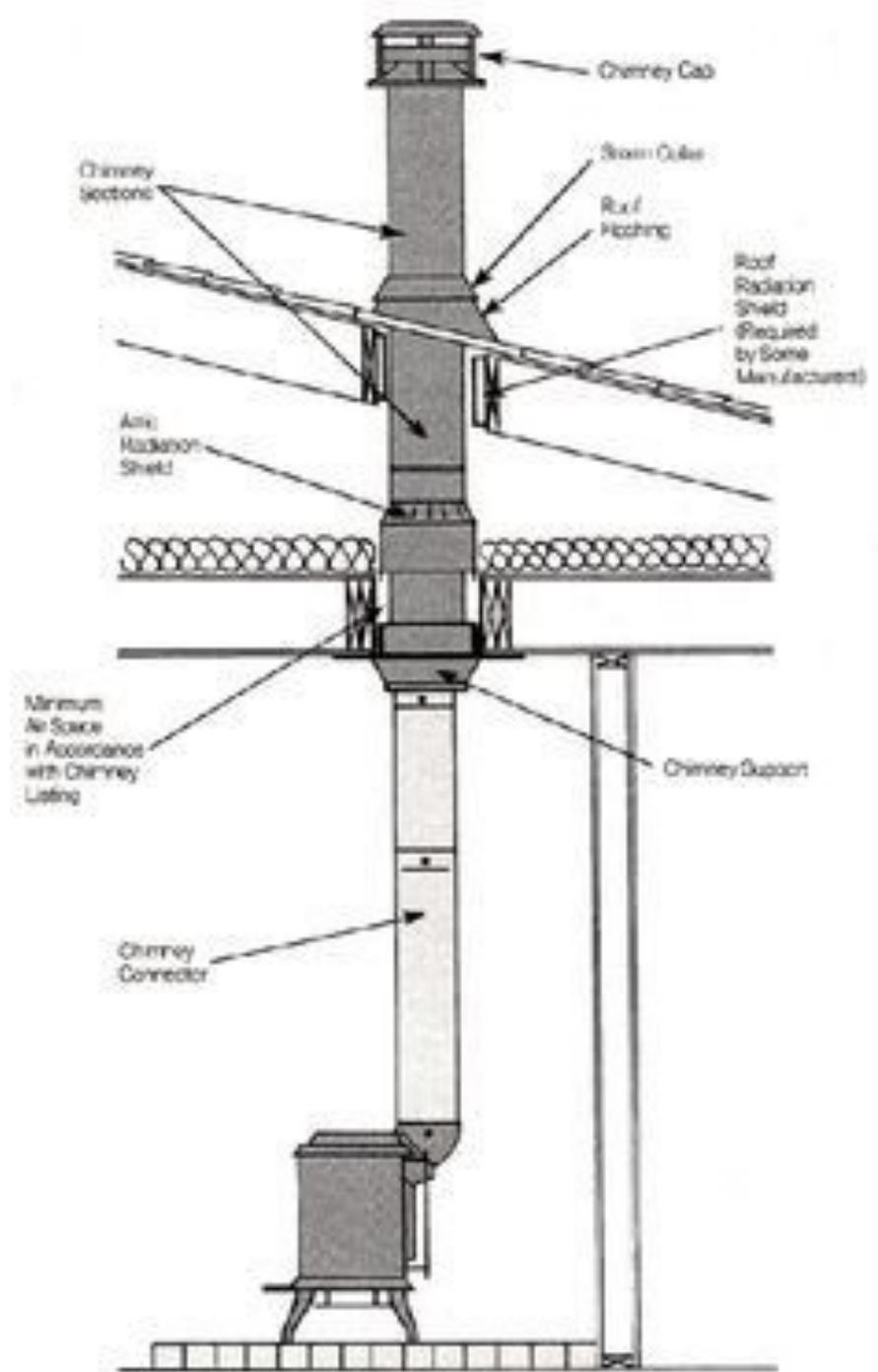
Collapse

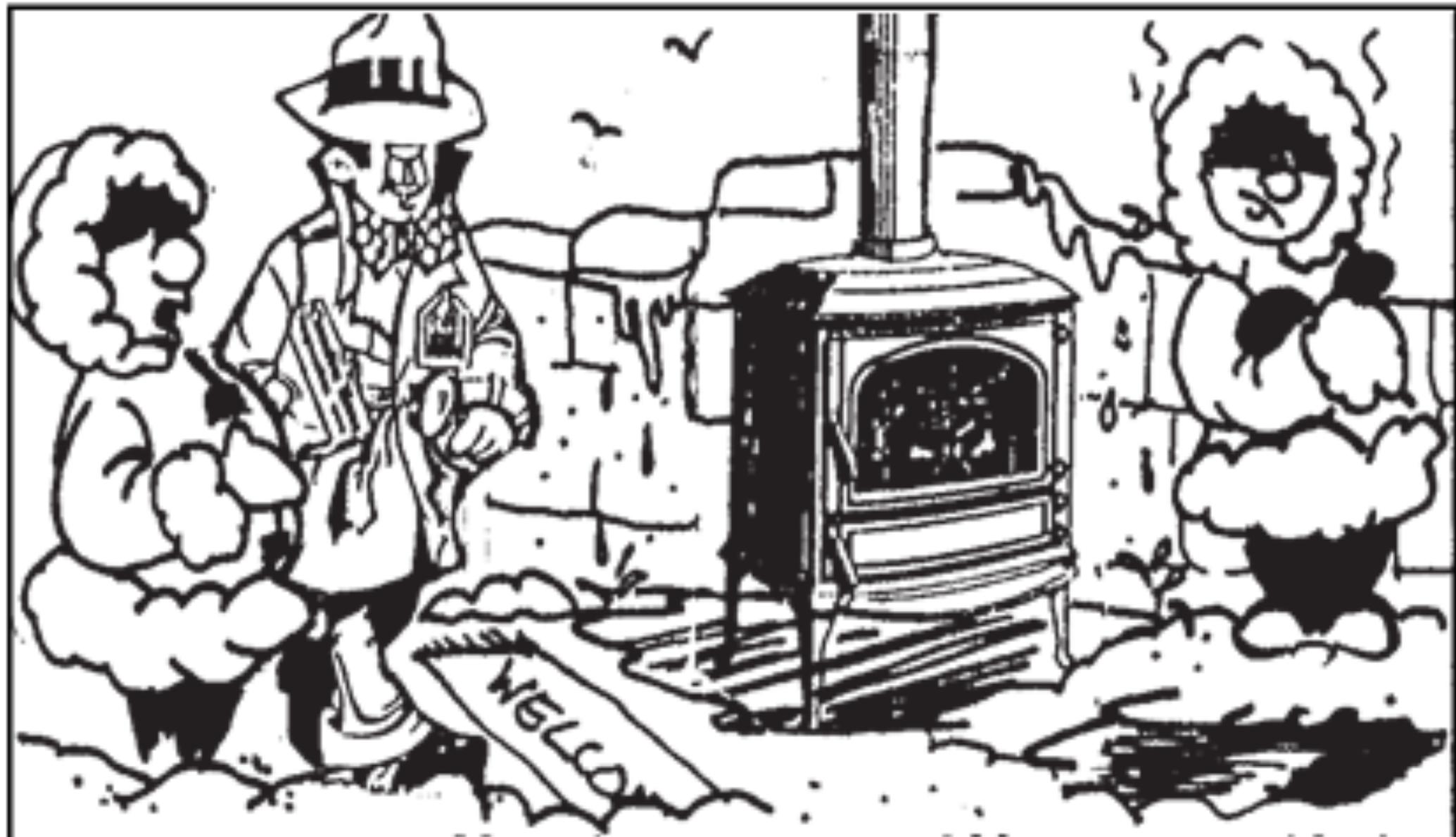


Loss of
consciousness



The two main factors to keep in mind for woodstove and fireplace safety, are installation, and maintenance.





I thought a wood burning stove would be a great idea!

There are three agencies in Canada that test and certify wood burning appliances. They are:



**The Canadian
Standards
Association**



**Underwriters'
Laboratories
of Canada**



**Warnock
Professional
Services Ltd.**



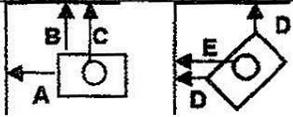
Model Stromboli Listed Solid Fuel Room Heater
 Model Lascar Listed Solid Fuel Room Heater

Tested to UL 1482 ULC S627

W/N XXXXX

PREVENT HOUSE FIRES - install and Use Only in Accordance With The Owner's Manual Provided With This Appliance. Contact Local Building or Fire Officials About Restrictions and Installation Inspections in Your Area.

INSTALLATION REQUIREMENTS - Do Not Connect This Unit To A Chimney Flue Serving Another Appliance. Use a residential type masonry or listed type HT factory-built chimney. Use 24 MSG black chimney connector or listed double wall chimney connector. Refer to local codes and the chimney manufacturer's instructions for precautions required for passing a chimney through a combustible wall or ceiling. Place on non-combustible floor protection with a minimum R value of 1.0 which extends 18 inches (450 mm) to the front and 8 inches (200 mm) to each side of the fuel opening. Do not obstruct the space beneath the heater. Adhere to the following minimum clearances to combustibles when using a single wall chimney connector. See owner's manual for additional clearance information.



US: A = 10" (255 mm) B = 12" (305 mm) C = 18" (460 mm)
 D = 11" (280 mm) E = 18" (460 mm)
 Canada: A = 21" (535 mm) B = 21" (535 mm)
 C = 27" (685 mm)
 D = 20" (510 mm) E = 27" (685 mm)

OPERATION REQUIREMENTS - For Use with Solid Wood Fuel Only. Do Not Overfire, if Heater or Chimney Connector Glows You Are Overfiring. Inspect and Clean Chimney Frequently, Under Certain Conditions of Use Creosote Buildup May Occur Rapidly. Do Not Use Grate or Elevate Fire, Burn Wood Fire Directly on Hearth. Risk of Smoke and Flame Spillage, Operate Only With Door Fully Open or Fully Closed. Replace glass only with glass supplied by the stove manufacturer or distributor.

CAUTION - HOT WHILE IN OPERATION. DO NOT TOUCH. KEEP CHILDREN, CLOTHING, AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS.

Manufactured by: Wolf Bavaria GmbH
 Frohnhof 9
 91580 Petersaurach
 Germany



CHIMNEY LINER
 TESTED TO UL 1777 (FOR USE IN EXISTING MASONRY CHIMNEYS)

MODEL FIREFLEX
 USE ONLY WITH UNDERWRITERS LABELED LW HT INLET TEE WHERE REQUIRED: ROOF FLASHING, LINER FITTINGS & RAINCAPS LISTED FOR FIREFLEX INLET TEE. FOR USE WITH APPLIANCES WHICH BURN SOLID FUEL, OIL, NATURAL GAS OR PROPANE.

WARNING
 THIS LINER TO BE INSTALLED (IN A MASONRY CHIMNEY WHERE THERE IS A MINIMUM CLEARANCE OF "0" (ZERO) INCH(S) AIR SPACE BETWEEN COMBUSTIBLE MATERIALS AND THE CHIMNEYS EXTERIOR. THE LINER MUST BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.

FIRESIDE CHIMNEY SUPPLY



CHIMNEY LINER
 TESTED TO UL 1777 (FOR USE IN EXISTING MASONRY CHIMNEYS)

MODEL FIREFLEX
 USE ONLY WITH UNDERWRITERS LABELED LW HT INLET TEE WHERE REQUIRED: ROOF FLASHING, LINER FITTINGS & RAINCAPS LISTED FOR FIREFLEX INLET TEE. FOR USE WITH APPLIANCES WHICH BURN SOLID FUEL, OIL, NATURAL GAS OR PROPANE.

WARNING
 THIS LINER TO BE INSTALLED (IN A MASONRY CHIMNEY WHERE THERE IS A MINIMUM CLEARANCE OF "0" (ZERO) INCH(S) AIR SPACE BETWEEN COMBUSTIBLE MATERIALS AND THE CHIMNEYS EXTERIOR. THE LINER MUST BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.

FIRESIDE CHIMNEY SUPPLY



**UNDERWRITERS
LABORATORIES**

LISTED INC. 5

FIREPLACE STOVE

NO. 16 489247

GRANDMA III TOP OUTLET

GRANDPA III TOP OUTLET

DATE 3-10-81

ALSO LISTED AS SOLID FUEL ROOM HEATER

MFG. BY: Fisher Mfg.

FOR FISHER
STOVE WORKS

INSTALL AND USE ONLY IN ACCORDANCE WITH THE MANUFACTURER'S
INSTALLATION AND OPERATING INSTRUCTIONS. READ CAREFULLY.

MINIMUM CLEARANCES TO COMBUSTIBLES (INCHES)

MODEL	SIDEWALL/BACKWALL INSTALLATION WITH VERTICAL CHIMNEY CONNECTOR			CORNER INSTALLATION	
	CHIMNEY CONNECTOR TO BACKWALL	HEATER TO SIDEWALL	HEATER TO BACKWALL	CHIMNEY CONNECTOR TO EACH WALL	REAR CORNER OF HEATER TO EACH WALL
GRANDMA	36 IN.	36 IN.	34 1/2 IN.	44 1/2 IN.	36 IN.
GRANDPA	36 IN.	36 IN.	34 1/2 IN.	46 IN.	36 IN.

MODEL	SIDEWALL/BACKWALL INSTALLATION WITH CHIMNEY CONNECTOR THROUGH BACKWALL			
	CHIMNEY CONNECTOR TO BACKWALL	HEATER TO SIDEWALL	HEATER TO BACKWALL	CHIMNEY CONNECTOR TO CEILING
GRANDMA	42 IN.	42 IN.	39 1/2 IN.	24 IN.
GRANDPA	42 IN.	42 IN.	39 1/2 IN.	24 IN.



1-FOR USE WITH SOLID WOOD, COAL FUELS ONLY. 2-DO NOT OVERFIRE UNIT.
3-INSPECT AND CLEAN CHIMNEY FREQUENTLY, UNDER CERTAIN CONDITIONS OF
USE CREOSOTE BUILDUP MAY OCCUR RAPIDLY. 4-DO NOT USE GRATE OR ELE-
VATE FIRE WHEN BURNING WOOD. 5-BUILD WOOD FIRE DIRECTLY ON HEARTH.
6-WHEN BURNING COAL, USE GRATE OR ELEVATE FIRE. 7-DO NOT BUILD COAL
FIRE DIRECTLY ON HEARTH. 8-DO NOT CONNECT THIS UNIT TO A CHIMNEY
FLUE SERVING ANOTHER APPLIANCE.

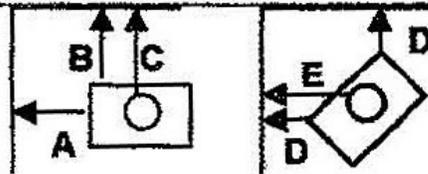


W/N XXXXX

Model Hekla Listed Solid Fuel Room Heater
Model Meru Listed Solid Fuel Room Heater
Model Elbrus Listed Solid Fuel Room Heater
Model Vesuv Listed Solid Fuel Room Heater
Model Etna Listed Solid Fuel Room Heater
Tested to UL 1482, ULC S627

PREVENT HOUSE FIRES - install and Use Only in Accordance With The Owner's Manual Provided With This Appliance. Contact Local Building or Fire Officials About Restrictions and Installation inspections in Your Area.

INSTALLATION REQUIREMENTS - Do Not Connect This Unit To A Chimney Flue Serving Another Appliance. Use a residential type masonry or listed type HT factory-built chimney. Use 24 MSG black chimney connector or listed double wall chimney connector. Refer to local codes and the chimney manufacturer's instructions for precautions required for passing a chimney through a combustible wall or ceiling. Place on non-combustible floor protection which extends 18 inches (450 mm) to the front and 8 inches (200 mm) to each side of the fuel opening. Do not obstruct the space beneath the heater. Adhere to the following minimum clearances to combustibles when using a single wall chimney connector. See owner's manual for additional clearance information.



US & Canada
A = 18" (460 mm) B = 15" (380 mm)
C = 18" (460 mm) D = 12" (305 mm)

OPERATION REQUIREMENTS - For Use with Solid Wood Fuel Only. Do Not Overfire, If Heater or Chimney Connector Glows You Are Overfiring. Inspect and Clean Chimney Frequently, Under Certain Conditions of Use Creosote Buildup May Occur Rapidly. Do Not Use Grate or Elevate Fire, Burn Wood Fire Directly on Hearth. Risk of Smoke and Flame Spillage, Operate Only With Door Fully Open or Fully Closed. Replace glass only with glass supplied by the stove manufacturer or distributor.

CAUTION - HOT WHILE IN OPERATION. DO NOT TOUCH. KEEP CHILDREN, CLOTHING, AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS.

Manufactured by: Wolf Bavaria GmbH
Frohnhof 9
91580 Petersaurach
Germany





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What's the difference between the UL, CSA, and ETL

- Listed Marks?
- Both marks demonstrate that the product that bears it has met the minimum requirements of widely accepted product safety standards as determined through the independent testing of a Nationally Recognised Testing Laboratory (NRTL).
- And, as part of that testing regimen, the product manufacturer has agreed to periodic follow-up inspections to verify continued compliance. The only real difference between the Marks is in the service, and services, of the testing laboratory behind them. It's here that Intertek's clients enjoy the real differences between UL and ETL. Our custom-tailored testing, quick turnarounds, and flexible work methods are literally changing the face of the industry by promoting an environment where the testing lab and product manufacturer work more collaboratively. Together, we deliver products to market more quickly, more smoothly, and more cost-effectively than ever before.

Installation and inspection of woodstoves and fireplaces

- Installation and inspection of woodstoves and fireplaces according to stringent standards can help protect your family from fire and carbon monoxide dangers.
- Installation must conform to "**CSA B365 Installation Code for Solid-Fuel Burning Appliances and Equipment.**"
- Ensure any stoves, inserts, fireplaces, chimneys and flue pipes carry a certification label indicating that it conforms to safety tests (CSA, ULC, ITS). Certified appliances carry a label with the logo of the certification agency. They are your assurance that the product has been tested and conforms to safety standards.

Installation and inspection of woodstoves and fireplaces

- All installations and inspections must be carried out by a WETT Certified individual. The Wood Energy Technical Training Program is a comprehensive series of courses covering installation codes, proper installation, maintenance and inspection procedures.
- **Please note: The community Fire Department does not inspect wood stoves. Please check you local yellow pages for WETT certified inspectors.**
- **Remember: When using any fuel-fired appliance, always make sure you have a carbon monoxide detector installed in the sleeping areas!**

General Information-Wood Burning Stoves (Homes, Cottages, Rentals):

- Wood Stove certification began over 25 years ago
- Over the years, Insurers have tightened the Underwriting Requirements and some Insurers do not cover any Outbuildings with wood-burning heat sources Most stoves built after 1985 will have a Certification label mounted on the rear wall of the stove (CSA, ULC, ITS label). This confirms the stove meets current Canadian Manufacturing Standards W.E.T.T.-refers to Installation Certification and can only be completed by a Certified W.E.T.T. inspector. All Insurers will require the stove meets CSA Code B 365 installation specifications and clearances for all solid fuel appliances
- Insurance Companies will not insure homemade or other stoves made that do not have the proper certification labels or certified installation of units and attached pipes
- wettinc.ca

The effects of smoke on health

Potential effects on health of high concentrations in ambient air of pollutants associated with wood smoke

Contaminants		Effects
Carbon monoxide	CO	Headaches, nausea, dizziness and aggravated angina in individuals with cardiac problems
Volatile organic compounds	VOC	Irritation of the respiratory tract and breathing difficulties. Some VOCs, like benzene, are carcinogenic.
Acrolein and formaldehyde	—	Irritation of the eyes and respiratory tract
Fine particles	PM _{2.5}	Irritation of the respiratory tract, aggravation of cardiovascular diseases and precocious mortality
Nitrogen oxides	NO _x	Irritation of the respiratory system, breathing pain, coughing, pulmonary edema
Polycyclic aromatic hydrocarbons	PAH	Some PAHs are considered or suspected to be mutagenic or carcinogenic
Dioxins and furans	—	Probably carcinogenic

Tips for maintaining your wood burning appliance:

- **Inspect and Clean your Chimney**
 - Check your chimney and clear any obstructions at the start of the heating season, and make sure damper controls work properly to keep smoke and toxic gases from building up inside the home.
 - Check chimneys and flue pipes often for creosote and soot build-up and clean to prevent a chimney fire.
 - Your chimney may have problems you can't see. If in doubt, consult a WETT (Wood Energy Technical Training) certified chimney sweep.
- **Cap It Off**
 - Maintain an appropriate chimney cap on top of your chimney to protect against damage from rain or snow.
 - Spark screens should be inspected regularly to make sure smoke can vent properly.
- **Check Stove Pipes and Connections**
 - Ensure all joints in flue pipes are securely fastened with at least 3 screws. Where flue pipes are joined together, the small (crimped) end should point toward the appliance.
- **Protect Floors and Walls from Heat and Sparks**
 - Keep combustible materials a safe distance away from wood stoves and fireplaces.
 - Always use a properly fitting screen for your fireplace.
 - Consult a WETT certified chimney sweep if walls get too hot.

Tips for maintaining your wood burning appliance:

- Burn Dry Wood
 - Burn properly dried well-seasoned wood to reduce the risk of excessive creosote build-up from inefficient burning or smoldering fires.
 - Store wood outdoors, stacked in an open area or shed away from the house or deck to provide good air flow that will assist drying.
- Remove Ashes Safely
 - Allow ashes to cool fully before cleaning them from your fireplace or wood stove.
 - Use only metal, non-combustible containers to remove ashes from the appliance.
 - Take them outside immediately and store well away from buildings on a non-combustible surface.
- Install Carbon Monoxide Alarms
 - All homes with fuel-fired appliances **MUST** have a carbon monoxide (CO) alarm.

List of symptoms...

Low Levels of CO

- flu-like symptoms
- slight headache
- nausea
- vomiting
- fatigue

Medium Exposure

- throbbing headache
- drowsiness
- confusion
- fast heart rate

List of symptoms...

Very High Levels

- Unconsciousness
- convulsions
- death

Summary...

- If there is one carbon monoxide symptom to remember...flu-like symptoms. Remember that if other members become ill at the same time, this would also be an indication of possible elevated CO levels. Also keep in mind that long-term low levels can have long-term health effects.

What's the level in your home?
Have you considered a CO alarm for your home? YOU DO KNOW IT IS THE LAW.....

The UL standard 2034 (1998 revision)

30 ppm
present

Alarm will sound when present for more than 30 days.
(Alarm required to ignore low-level concentration of CO unless present long-term.)

70 ppm
present

Alarm will sound within 1-4 hours.
(Alarm required to ignore concentration levels of 70 ppm for at least 1 hour before alarm will sound.)

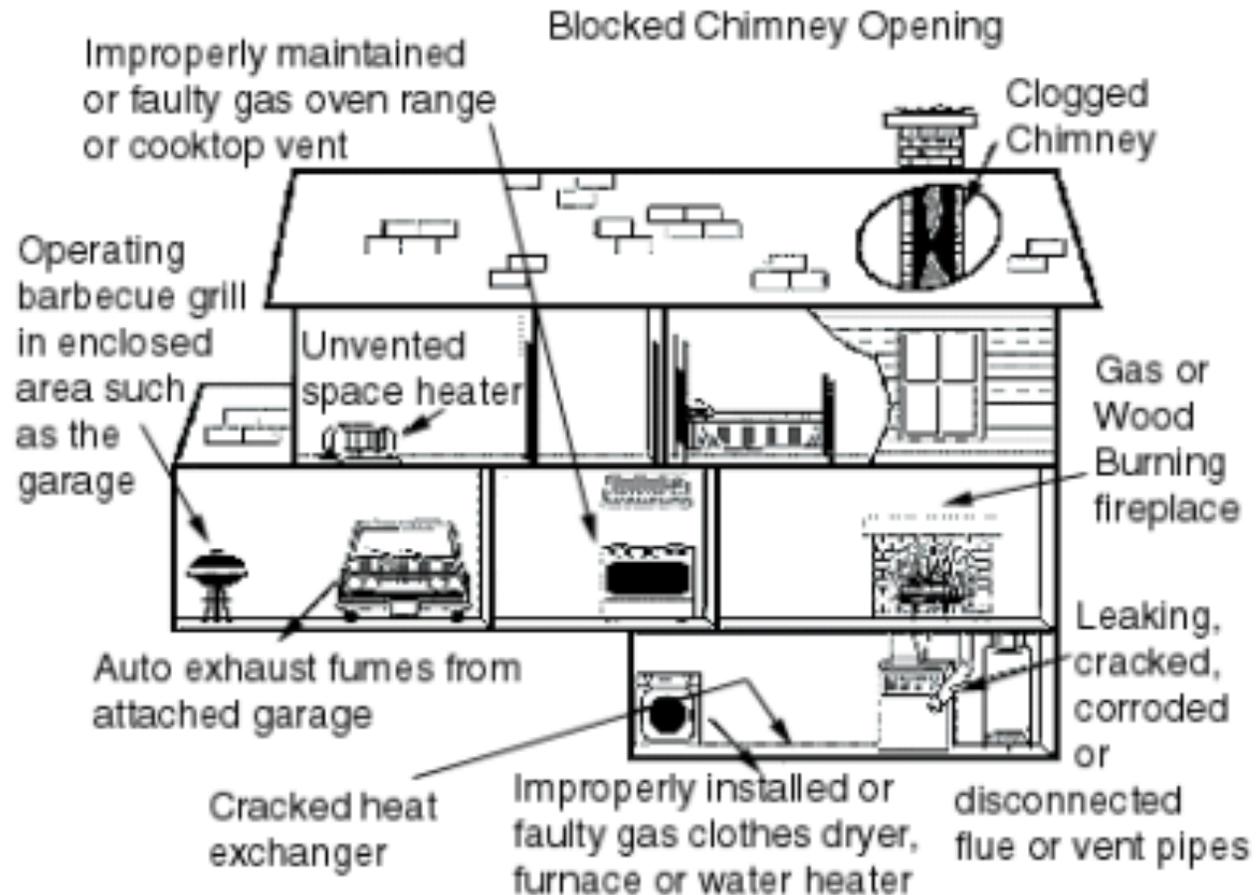
150 ppm
present

Alarm will sound within 10-50 minutes.

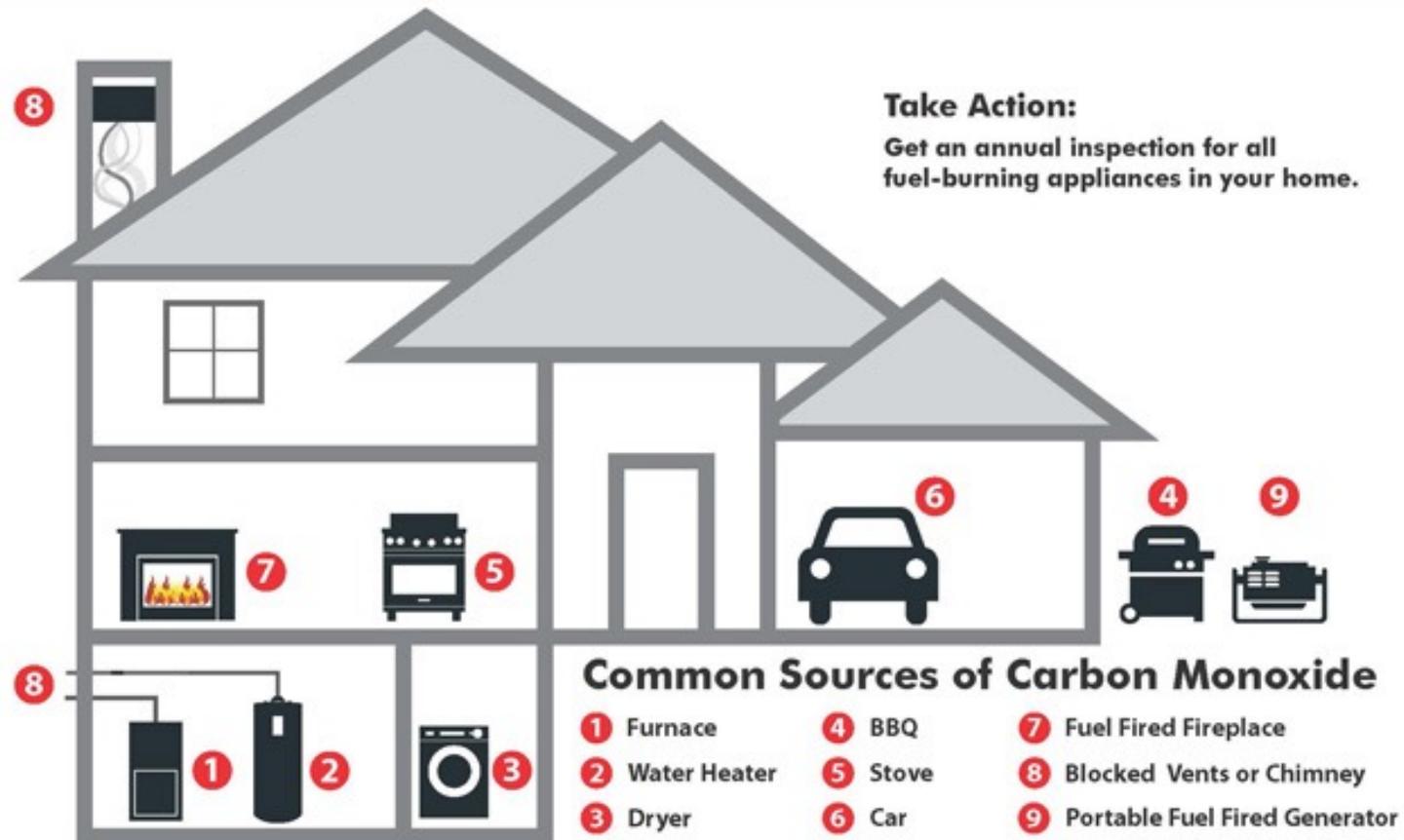
400 ppm
present

Alarm will sound within 4-15 minutes.

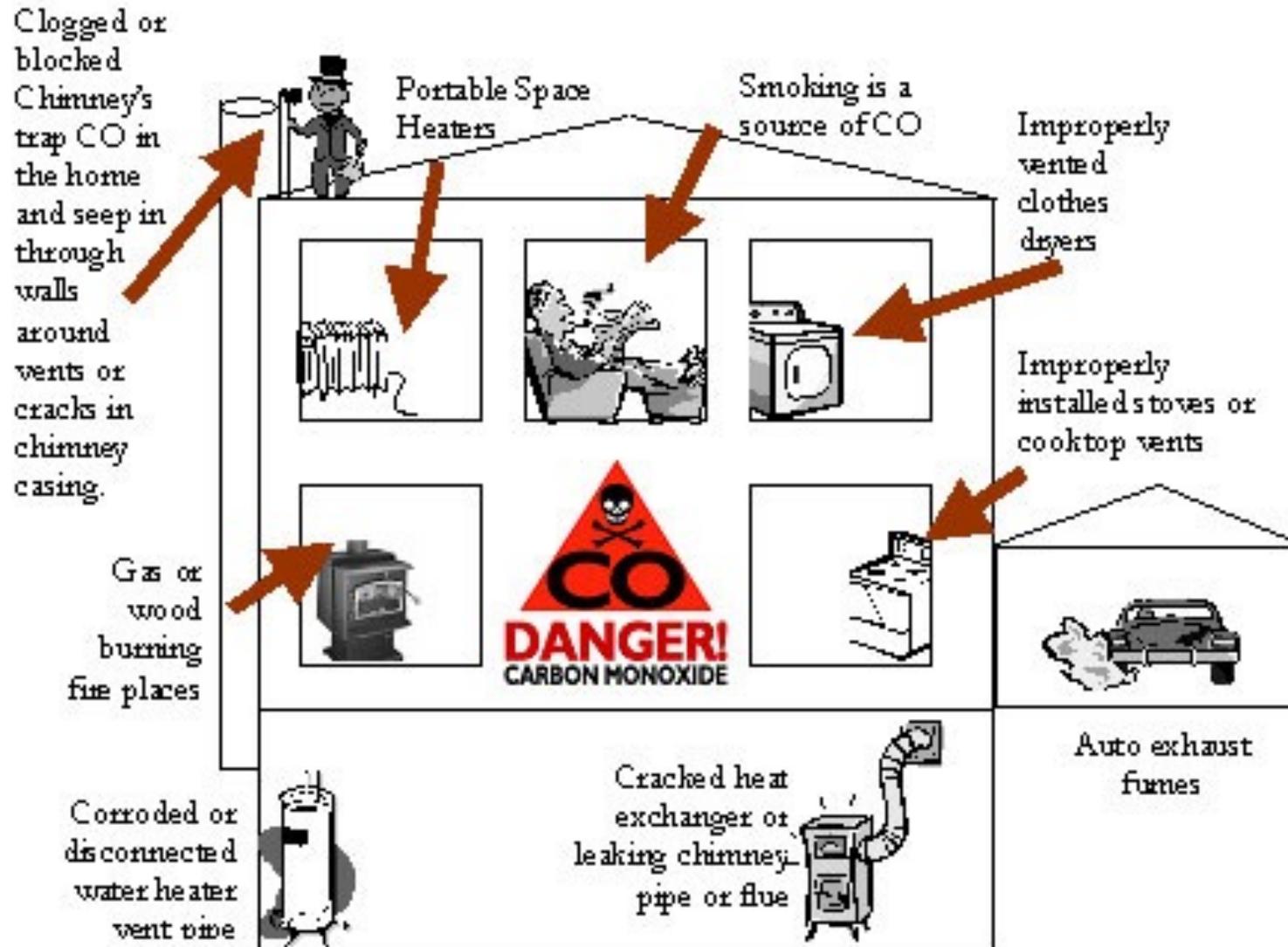
Sources of Carbon Monoxide

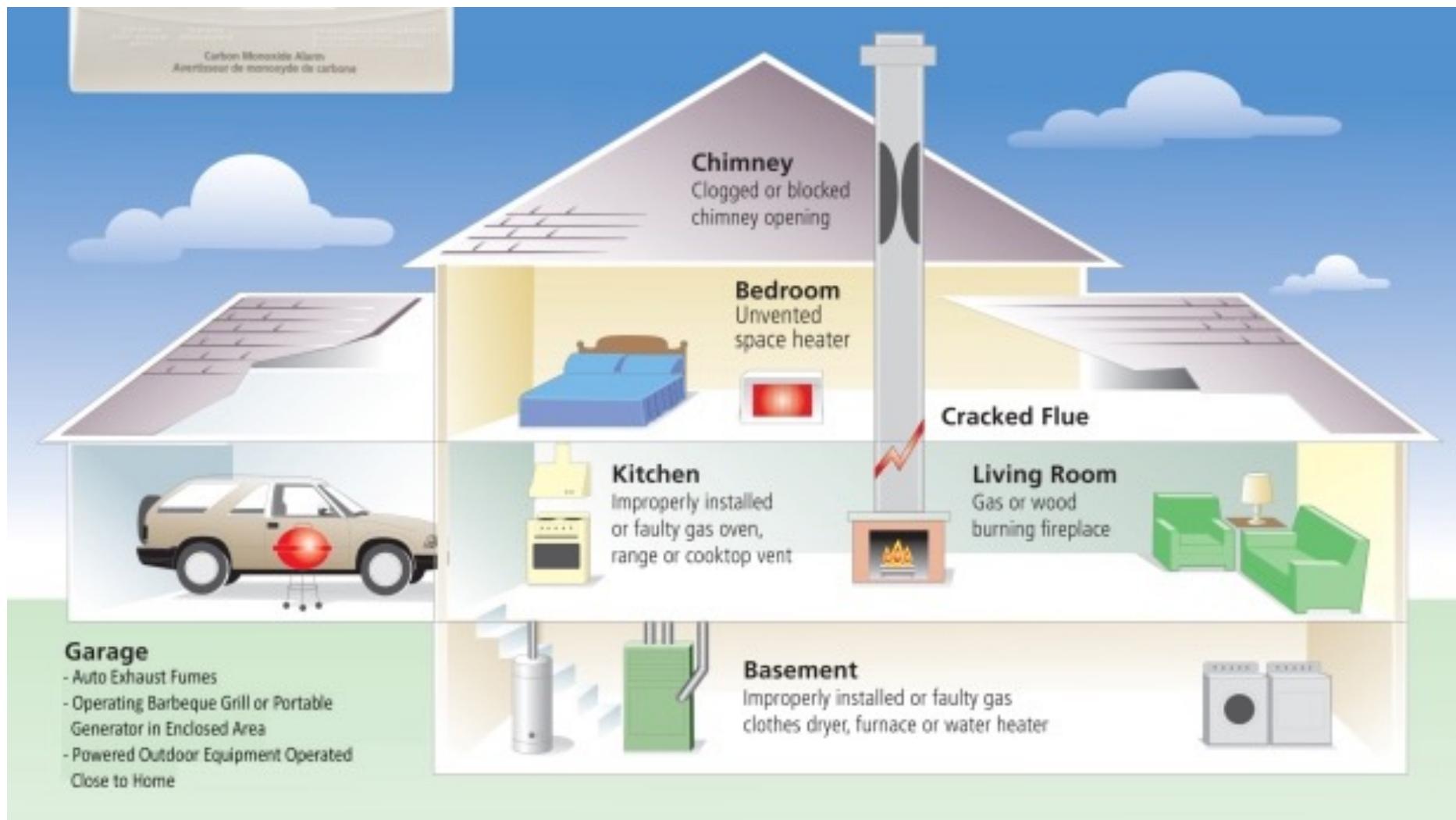


Sources of Carbon Monoxide



Carbon Monoxide Sources





Now that the compliance deadline has passed for Ontario's new carbon monoxide alarm law, the onus is on homeowners to understand how CO alarms work to help keep their family safe.



How CO Alarms Work*

THE COMPLIANCE DEADLINE HAS NOW PASSED
April 15, 2015

LED Lights

Green for normal operation, Red for alarm, Amber for error.

Test/Reset

Test CO alarm circuit operation and alarm reset.

Peak Level Memory

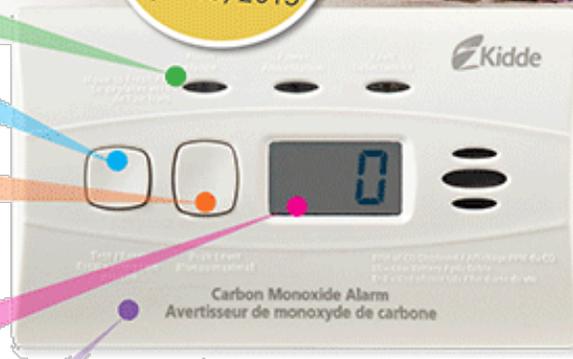
Displays the highest CO concentration measured since the last reset. Know if there was a reading while away from home and help emergency responders determine the best treatment.

Digital Display

Displays the level of CO the unit is sensing. The unit updates this reading every 15 seconds. See if CO is present and respond before it becomes a dangerous situation.

10-Year Sealed Lithium (Never Replace) Batteries

Unit will continue to operate for 10 years. Chirps to advise user to replace unit after 10 years of operation.



*these characteristics are common to some Kidde CO alarm models. Always read the manufacturer's instructions so you are familiar with your model.

Important Considerations:

If an Alarm Sounds

Under no circumstance should a CO alarm ever be ignored! If anyone is experiencing symptoms, you need to get everyone into fresh air and call 911 from outside.



CSA Certified

This logo means that this alarm has been tested and verified to applicable Canadian Standards Association (CSA) standards.

Alarm Placement and Replacement

The new law states that alarms must be placed outside ALL sleeping areas, and alarms must be replaced in accordance with the manufacturer's instructions (7-10 years depending on the brand).



UL Certified

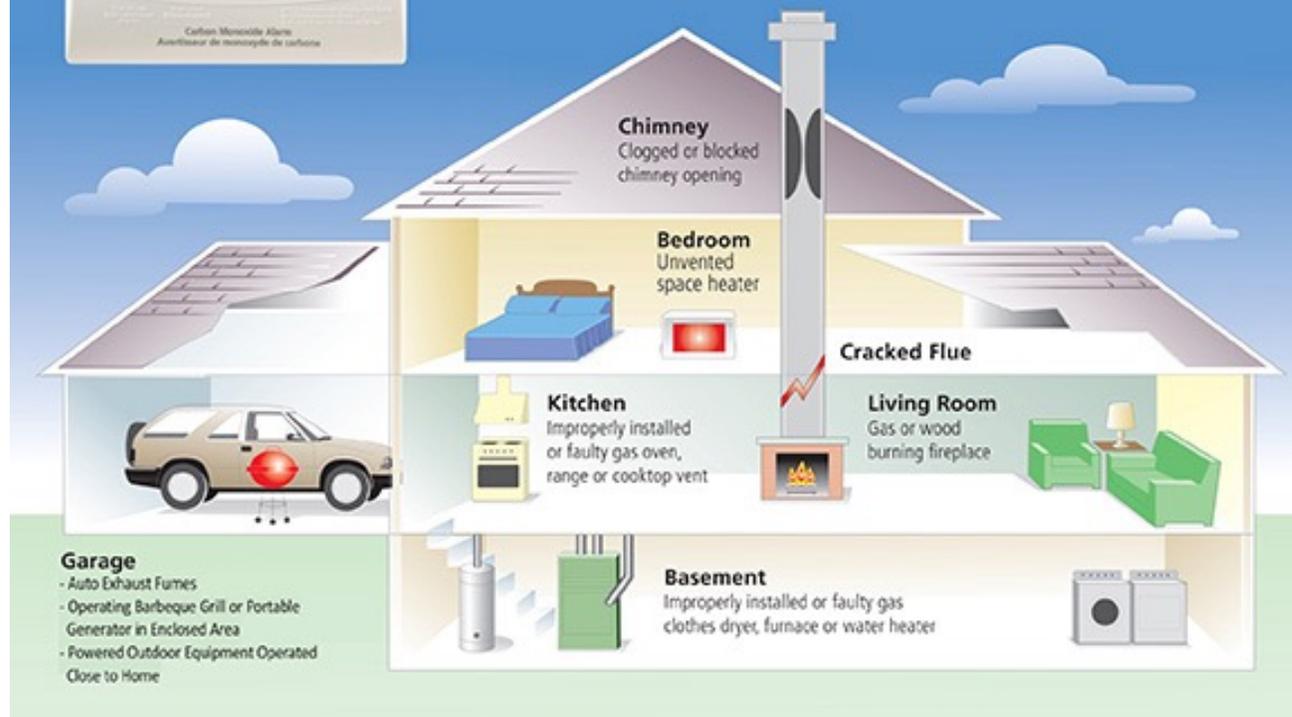
This logo means that the CO sensor is a design that meets the sensitivity requirements of Underwriters Laboratories (UL).

Protect Your Family from the Silent Killer

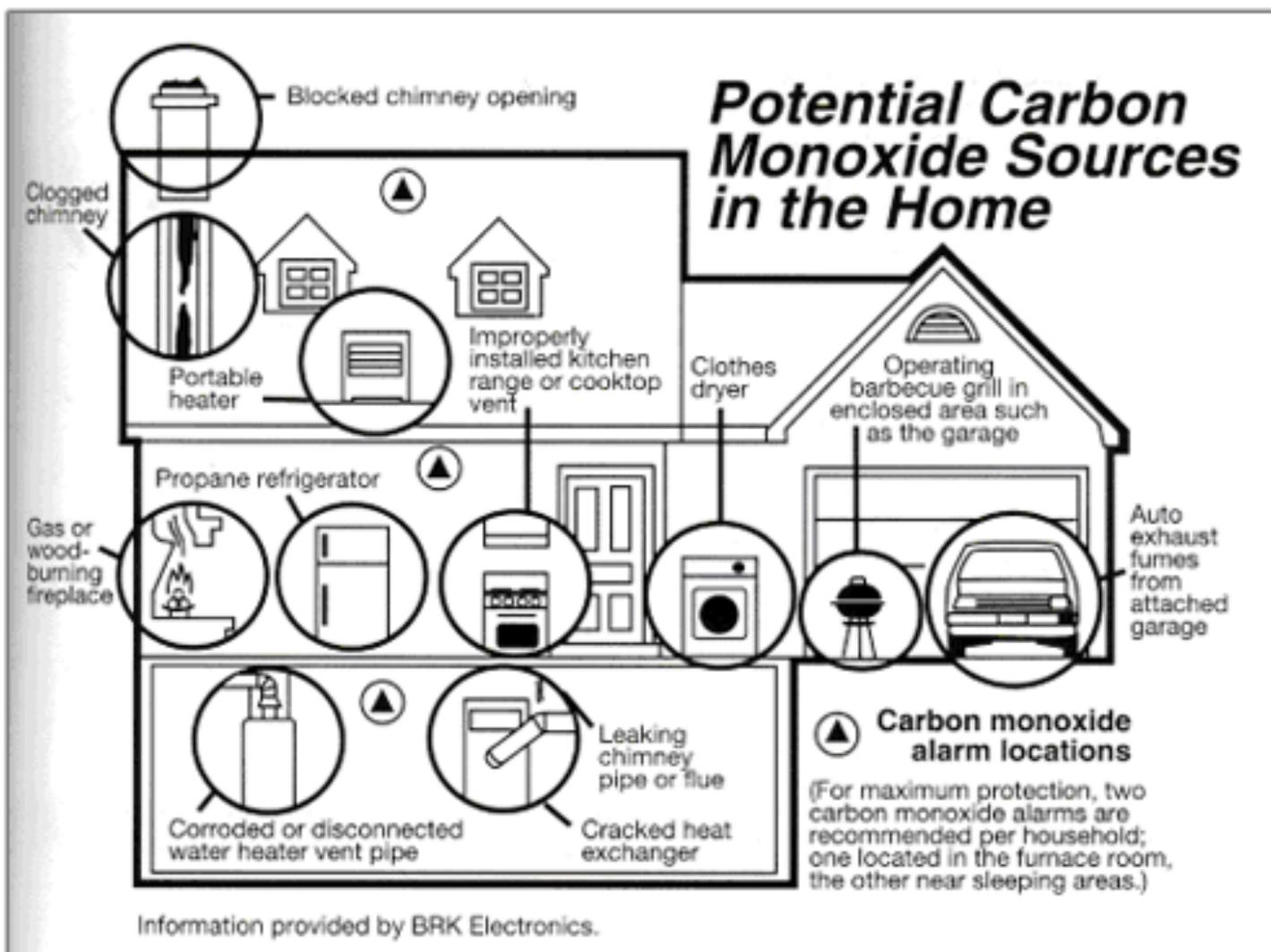


CO Alarms are Now Law in Ontario

Potential Carbon Monoxide Sources in Your Household

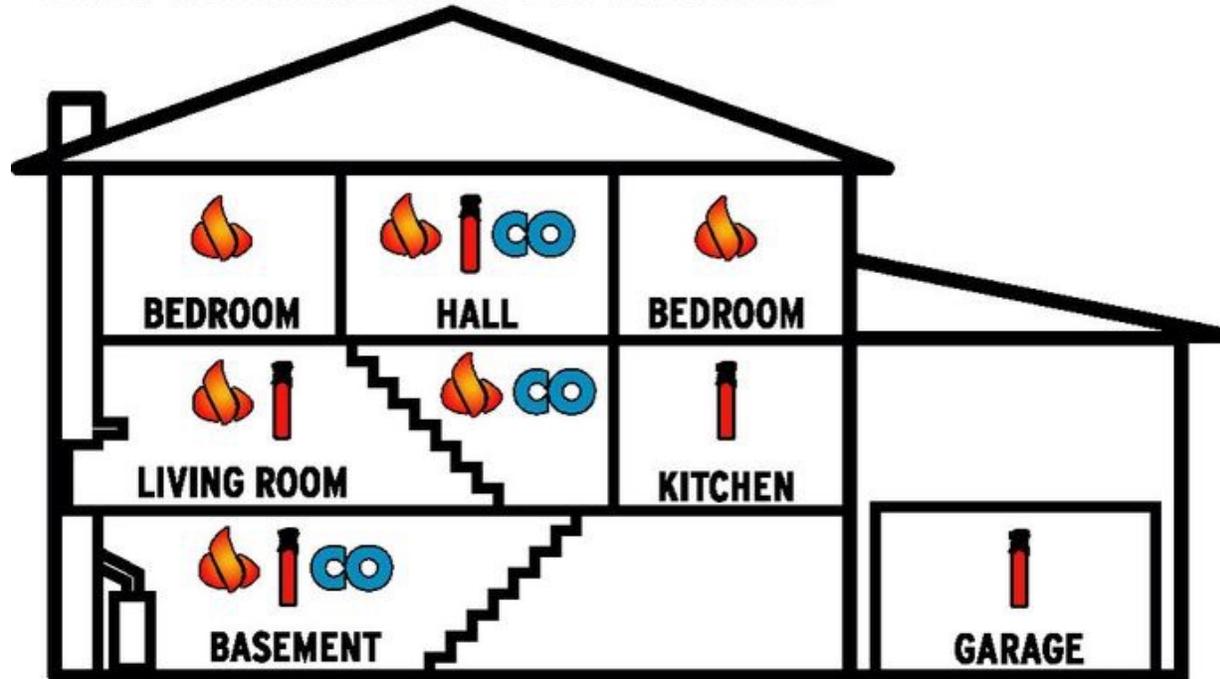


Potential Carbon Monoxide Sources in the Home





Recommended Locations



Smoke Alarm



Fire Extinguisher



Carbon Monoxide Alarm

Home Safety Product Placement Guide



- Smoke Alarm
- Combination Smoke / CO Alarm
- Carbon Monoxide (CO) Alarm
- 🧯 Fire Extinguisher
- ▲ Heat Alarm
- Escape Ladder

Technology
that saves
Lives







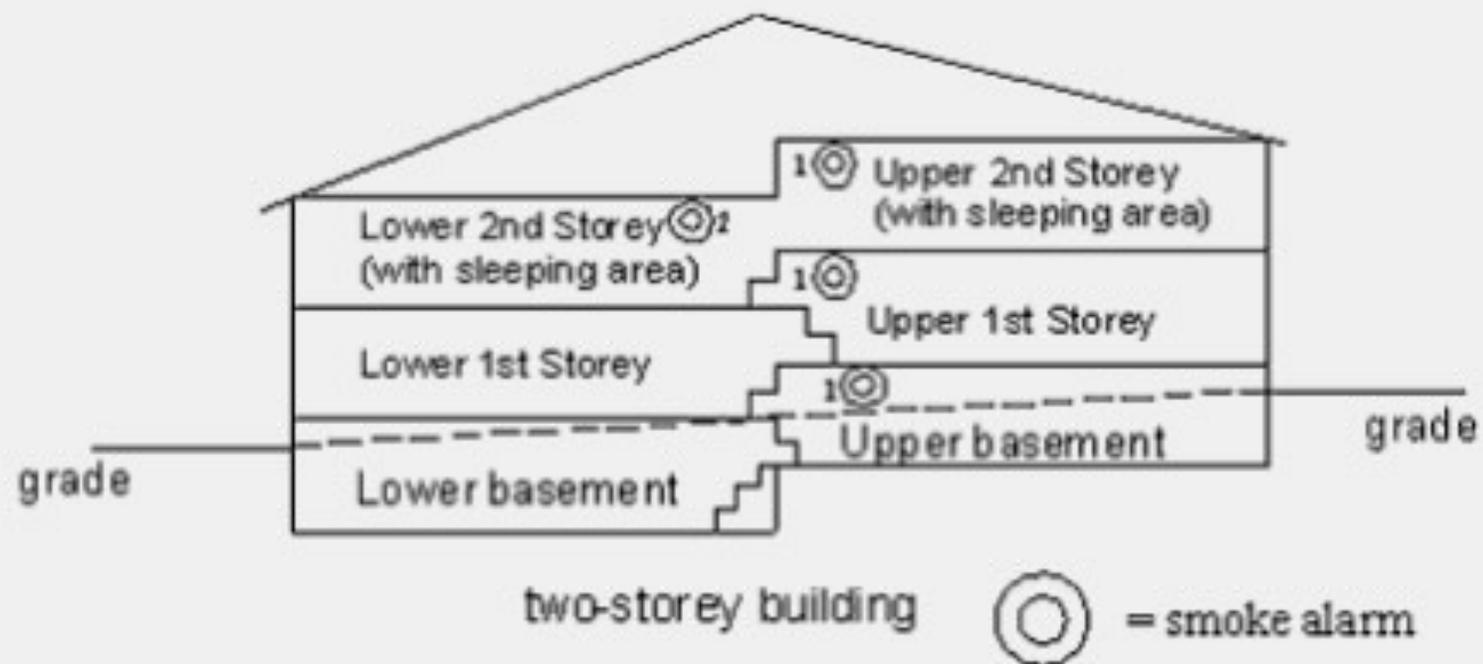
TEST

DO NOT PAINT



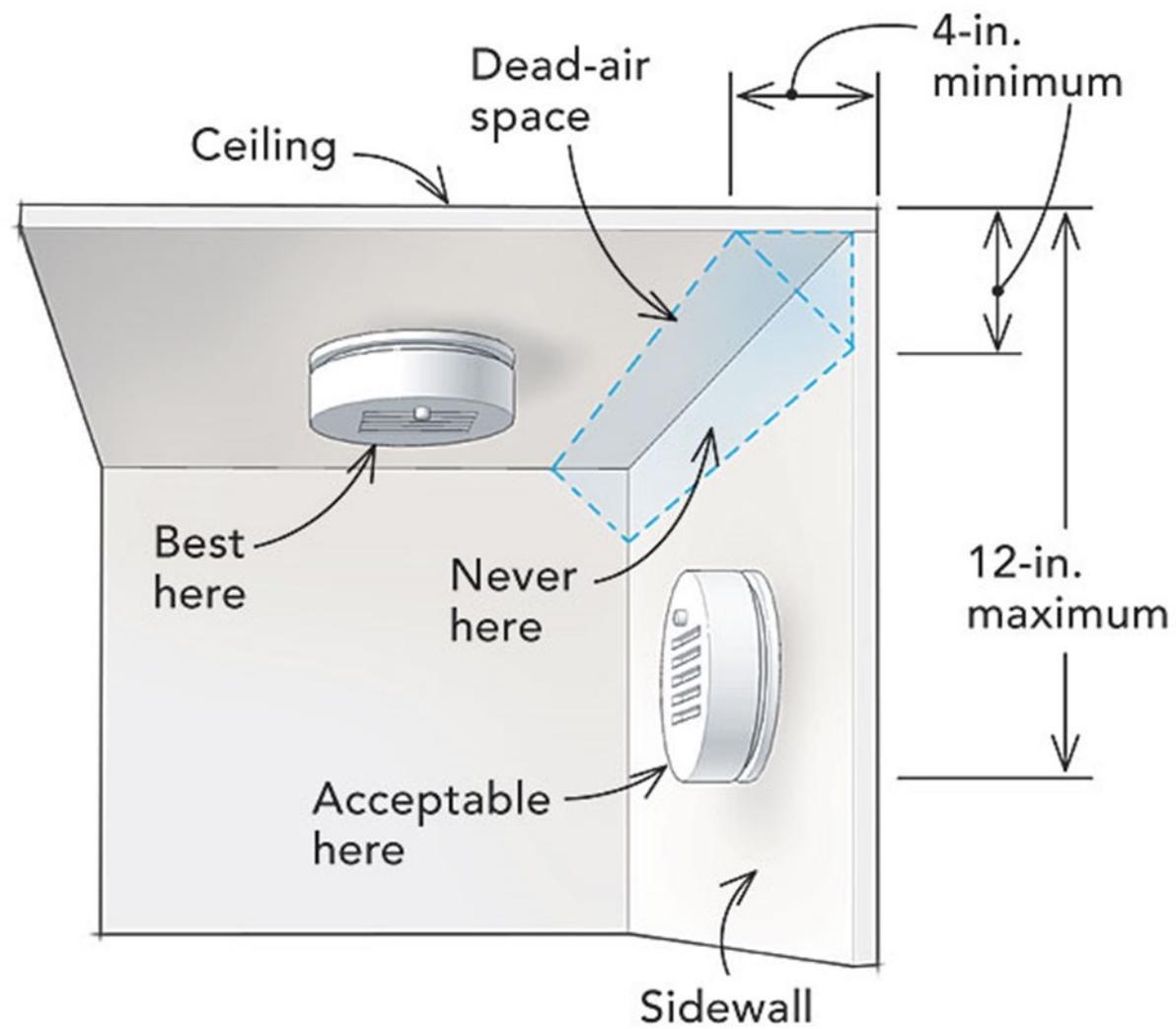
How Not to Choose a Smoke Alarm:



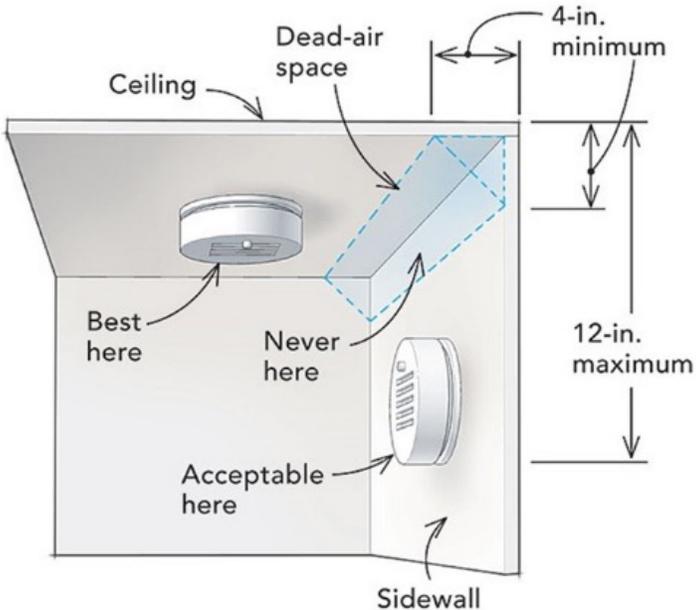


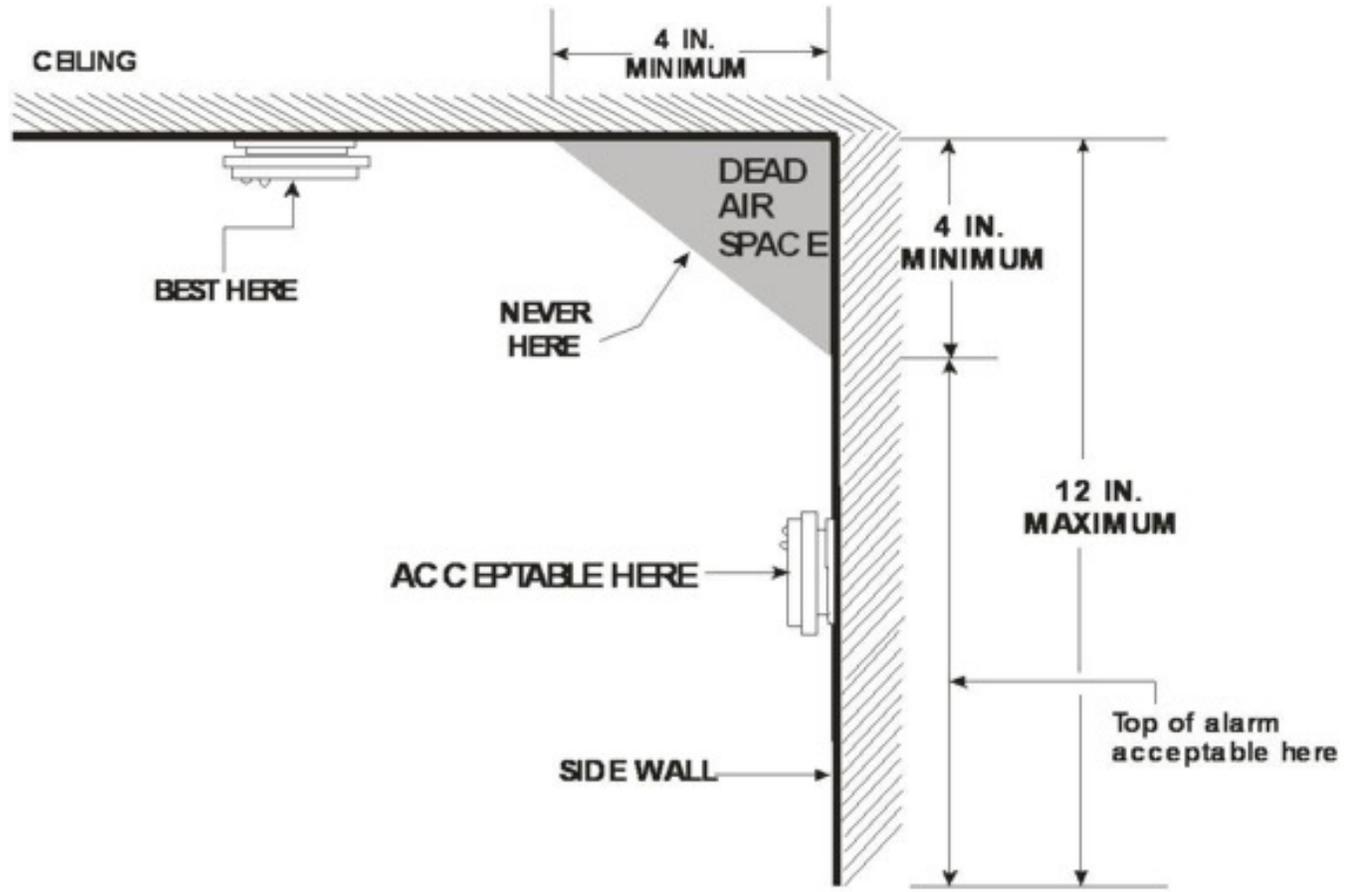
Note 1: **One smoke alarm required for each of the basement, first and second storeys.**

Note 2: **An additional smoke alarm is required on the lower level of the second storey due to sleeping rooms.**



WHERE TO INSTALL A SMOKE DETECTOR

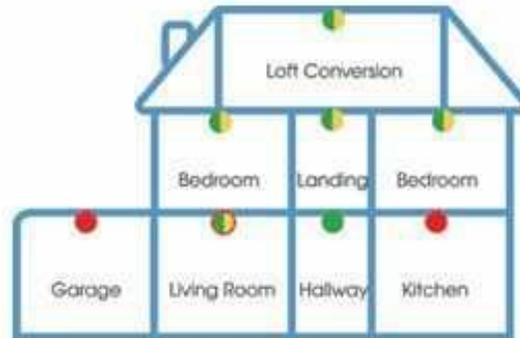




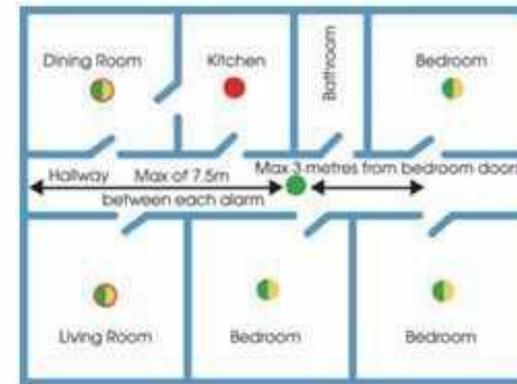
NOTE: Measurements shown are to the closest edge of the alarm.

Which Alarm to Fit Where?

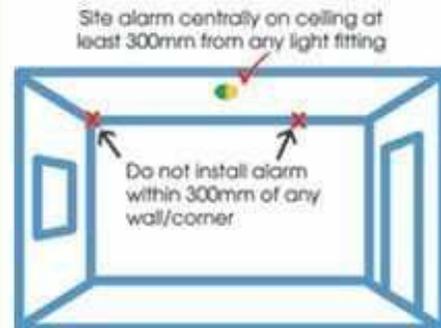
- Optical Smoke Alarm
- Heat alarm
- Optical or Ionisation smoke alarm as suited for particular circumstances
- Smoke or heat alarm as best suited for the particular circumstances



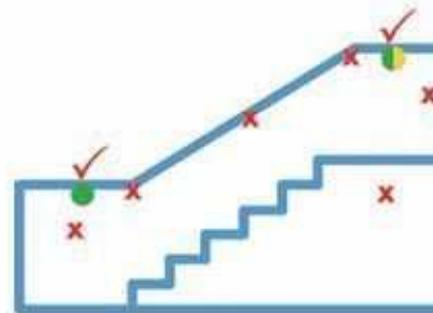
Example - 2 Storey House



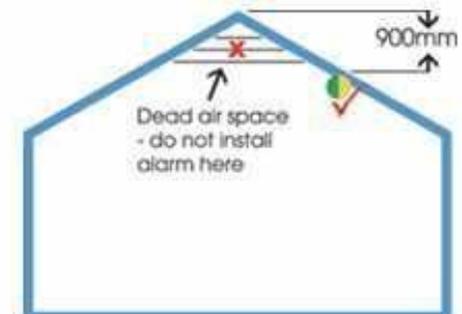
Example - Single Storey Dwelling



Alarm in a room



Alarms in hallways & landings



Alarm on a sloping ceiling



Fire Safety Plans

The Ontario Fire Code requires the implementation of a fire safety plan for many properties or businesses.

A fire safety plan helps to ensure effective utilization of fire safety systems, equipment and procedures in a building to protect people from fire.

The plan should be customized to mirror the resources of each individual building or complex of buildings.

A Fire Safety Plan is required to be reviewed regularly and any changes submitted to the Fire and Emergency Services.

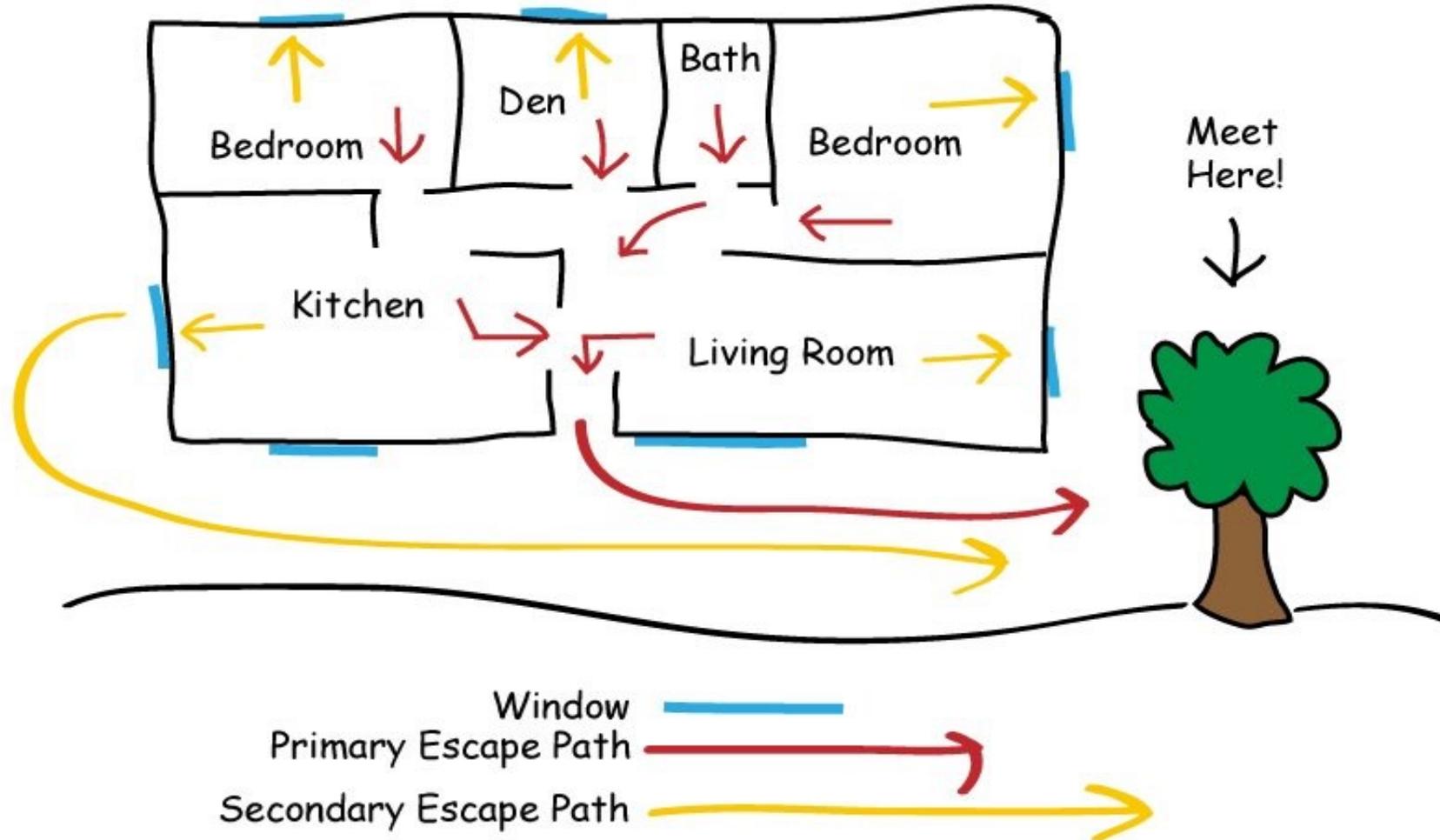
[Fire Safety Plan for Building with NO fire alarm system](#)

[Fire Safety Plan for Building with single stage fire alarm system](#)

[Fire Safety Plan for Building with two stage fire alarm system](#)

[Fire Safety Plan for School](#)

Don't wait until it is too late. Take the time with your family to plan 2 ways out of every room. Designate your family meeting place.



Basic fire escape planning

Items that block doors and windows in your home could keep you from escaping in the event of a home fire. And that could mean the difference between life and death. So unblock your exits today! Key to your family's safety is planning and practicing a home fire escape plan twice a year. Start by identifying two escape routes out of each room, if possible, then make sure that each of those escape routes can be used safely by everyone.

Basic fire escape planning

- Pull together everyone in your household and make a plan. Walk through your home and inspect all possible exits and escape routes. Households with children should consider drawing a floor plan of your home, marking two ways out of each room, including windows and doors. Also, mark the location of each smoke alarm. For easy planning, download NFPA's [escape planning grid](#) (PDF). This is a great way to get children involved in fire safety in a non-threatening way.
- A closed door may slow the spread of smoke, heat and fire. Install smoke alarms in every sleeping room, outside each sleeping area and on every level of the home. [NFPA 72, National Fire Alarm Code](#)® requires interconnected smoke alarms throughout the home. When one sounds, they all sound.

Basic fire escape planning

- Everyone in the household must understand the escape plan. When you walk through your plan, check to make sure the escape routes are clear and doors and windows can be opened easily.
- Choose an outside meeting place (i.e. neighbor's house, a light post, mailbox, or stop sign) a safe distance in front of your home where everyone can meet after they've escaped. Make sure to mark the location of the meeting place on your escape plan.

Basic fire escape planning

- Go outside to see if your street number is clearly visible from the road. If not, paint it on the curb or install house numbers to ensure that responding emergency personnel can find your home.
- Have everyone memorize the emergency phone number of the fire department. That way any member of the household can call from a neighbor's home or a cellular phone once safely outside.

Basic fire escape planning

- If there are infants, [older adults](#), or family members with mobility limitations, make sure that someone is assigned to assist them in the fire drill and in the event of an emergency. Assign a backup person too, in case the designee is not home during the emergency.
- If windows or doors in your home have [security bars](#), make sure that the bars have emergency release devices inside so that they can be opened immediately in an emergency. Emergency release devices won't compromise your security - but they will increase your chances of safely escaping a home fire.

Basic fire escape planning

- Tell guests or visitors to your home about your family's fire escape plan. When staying overnight at other people's homes, ask about their escape plan. If they don't have a plan in place, offer to help them make one. This is especially important when children are permitted to attend "sleepovers" at friends' homes. See NFPA's "[Sleepover fire safety for kids](#)" fact sheet.
- Be fully prepared for a real fire: when a smoke alarm sounds, get out immediately. Residents of [high-rise and apartment buildings](#) may be safer "defending in place."

Basic fire escape planning

Once you're out, stay out! Under no circumstances should you ever go back into a burning building. If someone is missing, inform the fire department dispatcher when you call. Firefighters have the skills and equipment to perform rescues.

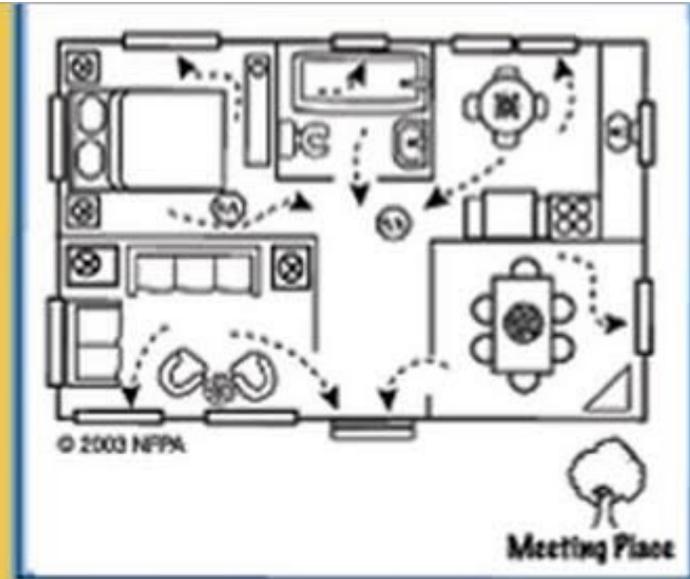
Basic fire escape planning

NFPA emphasizes the need to continue planning and practicing [home fire escape plans](#) and to make sure everyone in a home can be awakened by the sound of the smoke alarm. NFPA suggests practicing the escape plan during which the smoke alarm is activated so all family members know its sound.

Every home fire escape plan is different, and every family should know who will – and who won't – awaken at the sound of the smoke alarm. If someone doesn't wake up when the alarm sounds during a drill, the family should design an escape plan that assigns a grown-up who is easily awakened by the alarm to wake the sleepers, perhaps by yelling "FIRE," pounding on the wall or door, or blowing a whistle.

Almost two-thirds of home fire deaths resulted from fires in homes with *no smoke alarms or no working smoke alarms.*

77% of families have **not** developed and practiced a home fire escape plan, one of the most important components to surviving a home fire.



Fire can spread rapidly through a home, leaving a family as little as two minutes to escape safely once the alarm sounds.

Basic fire escape planning



can't stop laughing 😂



Fire Hydrant Systems

In a building, a fire hydrant system is a safety measure or emergency equipment required in some buildings that comprises a series of components that when assembled together provide a source of water to assist fire authorities in a fire.

Putting it another way, a fire hydrant system is a water supply with a sufficient pressure and flow delivered through pipes throughout a building to strategically located network of valves for fire-fighting purposes.

In some circumstances, water from a reticulated fire hydrant system can also be shared with other safety measures such as automatic fire sprinkler systems or fire hose reels.

fire-fighting operations

Conclusion

- No building can be completely “fireproof” because it is the contents and the occupants that create the greatest risk. How a building performs is not a factor of the materials used, but of how the building is designed and constructed. It is wrong to claim that sheet metal (steel stud) frame construction provides better fire safety than wood-frame construction.
- Building codes require that all building systems perform to the same level of safety, regardless of material used.
- Woodframe construction meets, and in many cases exceeds these requirements to provide safe housing for North Americans.

- Fire Safety and all associated Prevention methods are a sure way to reduce both fire and human loss. The Fire Inspection section works collaboratively with local Government, local Fire Service Officials and other allied agencies to ensure that a satisfactory degree of Life Safety is maintained.

NFPA Journal, National Fire Protection Association

- “Several patterns become apparent when we examine the various factors that lead to ignition. Perhaps the most obvious is that many people are simply oblivious to the fact that the way they interact with various items in their environment can lead to fire.”

- Thank you

- We are;

SAFE JOURNEY