

# SMOKE ALARMS SAVE LIVES

According to recent data,

**NEARLY TWO-THIRDS OF RESIDENTIAL FIRE FATALITIES OCCURRED IN HOMES WITHOUT PROPERLY FUNCTIONING SMOKE ALARMS.**

Any smoke alarm that is 10 years or older should be replaced, regardless of type.

Since only working smoke alarms can save your life, it's important to perform these regular maintenance steps to make sure that yours will work when you need it:

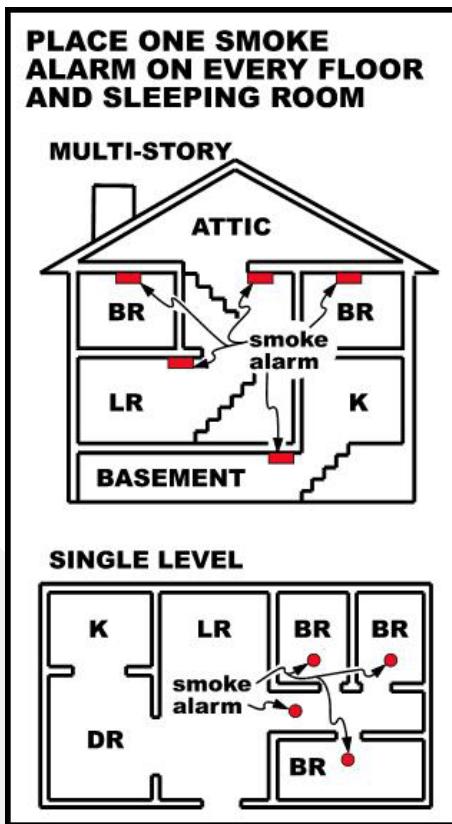
 **TEST** all smoke alarms monthly.

 Change smoke alarm **BATTERIES** annually.

 A **CHIRPING** smoke alarm indicates a problem. Try replacing the battery and test the alarm. It may be necessary to replace the alarm if the chirping continues.

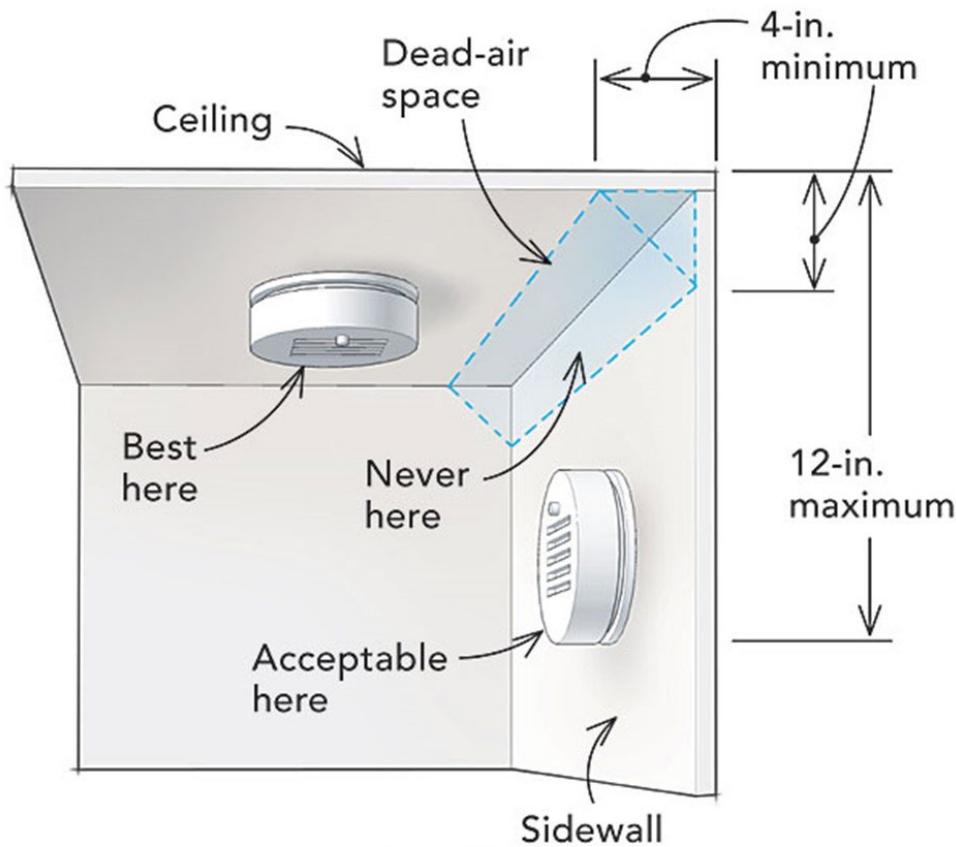
 **REPLACE** smoke alarms that are 10 years old or older.

## REQUIRED SMOKE ALARM LOCATIONS: 2015 IPMC - 704.2



- 1. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms.
- 2. In each room used for sleeping purposes.
- 3. In each story within a dwelling unit, including basements but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

Every required location shall have a smoke alarm installed in accordance with the manufacturer's specifications. Typically approved locations are shown in the diagram above. Additionally smoke alarms should not be installed within 3' of a ceiling fan.



1. Ionization smoke alarms shall not be installed less than 20' from a permanently installed cooking appliance (or 10' if equipped with an alarm silencing switch.)
2. Photoelectric smoke alarms shall not be installed less than 6' from a permanently installed cooking appliance.
3. No smoke alarm should be installed less than 3' from a bathroom door opening.

# TYPES OF SMOKE ALARMS

**Ionization Smoke Alarms (I)** - Ionization smoke alarms contain a very small amount of americium-241 within an ionization chamber. They create an electric current between two metal plates, which sound an alarm when disrupted by smoke entering the chamber. Ionization smoke alarms can quickly detect the small amounts of smoke produced by fast flaming fires.

**NOTE:** This type of smoke alarm may be prone to nuisance tripping, for example, when you burn something cooking. When this happens, people are more likely to disable the alarms.

**Photoelectric Smoke Alarms [P]** - Photoelectric smoke alarms contain a light source in a light-sensitive electric sensor. Normally, light from the light source shoots straight across and misses the sensor. When smoke enters the chamber, it scatters the light, which then hits the sensor and triggers the alarm.

Photoelectric smoke alarms typically respond faster to a fire in its early, smoldering stage, often before the source of the fire bursts into flames. These alarms are more sensitive to the large combustion particles that emanate during slow, smoldering fires.

**Dual Sensor Smoke Alarms** - Dual sensor smoke alarms include both ionization and photoelectric sensors.

**NOTE:** Because, there are no industry standards for setting the individual sensor sensitivity in dual sensor alarms, a dual sensor alarm could have a non-functional ionization sensor, but as long as the photoelectric sensor works, it could still meet the national standards developed by Underwriters Laboratories (UL).

**Carbon Monoxide (CO) Alarms** – Carbon monoxide alarms are not the same as smoke alarms, however they are available in combination with either of the previously listed smoke alarm sensors.

Although CO poisoning can almost always be prevented, every year, more than 500 people in the United States die as a result of accidental, non-fire exposure to this toxic gas and thousands more require medical care for carbon monoxide poisoning each year.



**More details on the International Property Maintenance Code of the City of Dubuque available at [www.cityofdubuque.org/pmc](http://www.cityofdubuque.org/pmc)**