

UL 217 Smoke Alarm Messages

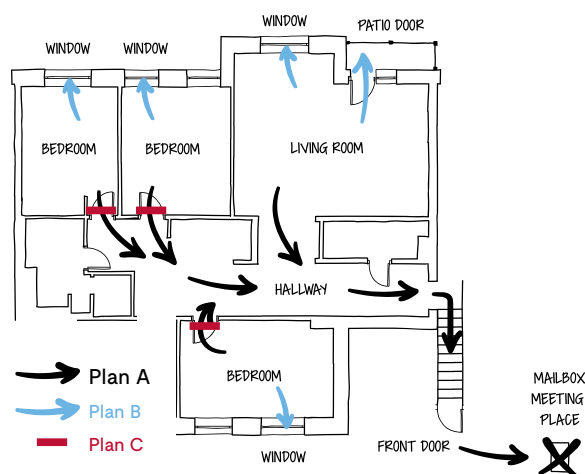
Having working smoke alarms can save your life

Having listed and working smoke alarms in your home is as important as wearing a seatbelt in your car. It's a necessity that protects you and your loved ones.

- Check your smoke alarms monthly. Press the test button to be sure the alarm is working.
 - Do not disable smoke alarms. In 46% of home fires in which a smoke alarm was present, but did not operate, the smoke alarm had missing or disconnected batteries. (Source: NFPA)
 - The National Fire Protection Association (NFPA) and Consumer Protection Safety Commission (CPSC) cite cooking nuisance alarms as the leading reason for a smoke alarm to be disabled.
- Install smoke alarms on every level of the home, in every sleeping room and outside each separate sleeping area.
 - It's important to install smoke alarms correctly, make sure they are in working order, and check for a label from a third-party lab indicating that they've been tested and certified to meet safety standards. Follow these [helpful tips](#) on installing and maintaining smoke alarms from NFPA.
- Working smoke alarms will continue to provide protection through the end of their 10-year life span. At the end of the 10-year span, install new alarms with enhanced technology, if possible.
- Always **Close Before You Doze**. A closed door can be an effective barrier against deadly levels of carbon monoxide, smoke, heat and flames, keeping rooms survivable for longer. With smoke alarms outside sleeping areas and a closed door, you and your family will have the most time possible to escape or call for help if escape isn't possible.

Having working smoke alarms in your home is more important today than ever

- Fire moves faster through homes today, meaning you have less time than ever to escape in the event of a fire.
 - Fire moves fast. Today, you have three minutes or less from the time a fire starts before a room could be at 1,000 degrees Fahrenheit and filled with lethal levels of smoke. You may have less than 3 minutes to escape. However, lithium-ion battery fires spread significantly faster than other types of fire. From the first sign of an issue with a lithium-ion battery, there may be as little as 1 minute or less to escape.
- In addition, people can help themselves and their family be fire safe by:
 - » Having and practicing an escape plan A, B, and C. Know what to do if you cannot escape.
 - » Having working smoke alarms inside and outside every sleeping area, on every floor of your home, including the basement.
 - » Closing the bedroom door before going to bed (Close Before You Doze). A closed door can be an effective barrier against deadly levels of carbon monoxide, smoke and flames – and may give everyone more time to respond to a smoke alarm.



Smoke alarms are getting smarter

- New technology in smoke alarms has made them better at knowing the difference between common steam or smoke from cooking, and an actual, potentially life-threatening fire.
 - Cooking nuisance alarms account for 73% of nuisance alarms, while a low battery chirp and steam account for only 8% and 2%, respectively¹.
 - While it is difficult to eliminate all nuisance alarms, the new generation of alarms will greatly reduce nuisance alarms due to cooking - the reason many people disable their smoke alarms - while still having increased sensitivity and overall performance.
- Many smoke alarms today are interconnected, meaning that when one smoke alarm sounds, they all sound.
- This can help reassure those concerned about hearing their alarm with a closed door.

If there is a fire in your home, there won't be time to plan a way out in the moment. Create an escape plan for your home and practice it with your family so you're ready for a fire emergency. Don't wait, plan ahead. Make sure your Fire Escape Plan includes a Plan A, B and C!



Professional Stakeholder Messages

New smoke alarms must meet new standards starting in July 2024

What's different?

New smoke alarms are moving to performance-based technology, including:

1. Advanced sensors to distinguish between fire and more common household fumes from cooking to reduce nuisance alarms.
 - Smoke alarms that comply with the new standards maybe equipped with more advanced sensors or use several sensors (multi-criteria) and algorithms that will be capable of distinguishing the difference between a smoldering or flaming fire and cooking smoke. This can be accomplished based on the differences in smoke particle size, quantity, gas concentrations and color between fires and cooking aerosols. Advancements in detector sensor design and software algorithms have made this possible.
 - While it is difficult to eliminate all nuisance alarms, it is anticipated that this new generation of products will greatly reduce nuisance alarms due to cooking.
2. Advanced technology to detect smoke characteristics from both smoldering and flaming fires.
 - It is currently common to see two kinds of alarms – ionization smoke alarms are quicker to warn about flaming fires. Photoelectric alarms are quicker to warn about smoldering fires. In the past, the type of alarm you had depended on the type of fire you thought you might have, but there's no way of knowing if a home fire will be smoldering or flaming. Smoke alarms that meet the new standards will be equipped to detect smoke characteristics between a fast-moving and smoldering polyurethane foam fire, completely eliminating the guesswork.





As leaders in fire safety and fire research, UL worked with industry experts to revise the requirements of its smoke alarm standards. The new and revised requirements represent the most significant changes to these Standards since their initial publication in 1976.

1. New fire and smoke tests were added to the Standards, including a flaming polyurethane foam test and a smoldering polyurethane test. Research conducted by UL, the National Institute of Standards and Technology (NIST) and the National Fire Protection Association (NFPA) demonstrated the need for these tests due to changes in home furnishing and finish materials over the past 30 years. The smoke produced from burning or smoldering foam and plastic generates a smoke aerosol that differs in terms of smoke color, quantity and mean diameter from the smoke previously tested and covered by the Standards.
2. A cooking nuisance test was also added to both Standards: research shows that the number one reason why people disable smoke alarms is due to nuisance alarms caused by cooking.
3. Products that are being developed to meet the new requirements need to meet two important criteria:
 - Increased sensitivity to meet the two new polyurethane foam tests
 - Ability to distinguish between smoke aerosols from fire sources and smoke aerosols from cooking sources

* It is important to note that working smoke alarms that are within their 10-year lifespan continue to provide protection in the case of fire. When a smoke alarm needs to be replaced, look for listed and labeled smoke alarms that are certified as meeting the enhanced safety Standards.

Key Smoke Alarm Data from 2023 Consumer Survey

Most Americans trust their smoke alarms to notify them in the event of a fire and are checking them routinely to ensure they're working.

93%

of Americans have smoke alarms installed in their home

77%

of respondents with smoke alarms say all of their alarms are definitely currently working

73%

of families with a child 9 or younger in the household have an escape plan

42%

of respondents have tested their smoke alarms in the past month,

26%

in the past six months, and

17%

in the past year

Younger generations (Millennial and Gen Z) that have an escape plan are more likely to say they practice theirs monthly (27% vs. 11% Gen X and older)



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Through advanced fire science, rigorous research, extensive outreach and education in collaboration with our international network of partners, we impart stakeholders with the information, tools and resources that enable them to make better, more fire-safe decisions that ultimately save lives and property. To learn more, visit fsri.org and follow **FSRI** on [Twitter](#), [LinkedIn](#), [Instagram](#), [YouTube](#), and [Facebook](#).

About ULRI

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Additional Resources

Helping to Reduce Cooking Nuisance Alarms with UL 217