

The Hard-Wired Truth About Smoke Alarms



USFA (U.S Fire Administration) states that over 80% of all fire deaths in the United States occur in our homes. And this is despite the proliferation of smoke detectors over the last four decades. National Fire Prevention Association (NFPA) reports in "[Smoke Alarms in U.S. Home Fires](#)", that Smoke alarms were present in three-quarters (74 percent) of the reported home fires. The goal is for 100% of homes to have working smoke alarms because almost three out of five home fire deaths were caused by fires in properties with no smoke alarms (41 percent) or smoke alarms that failed to operate (16 percent).

The argument for having smoke alarms in every home is overwhelming.

"Every year in the United States, about 2,000 people lose their lives in residential fires. In a fire, smoke and deadly gases spread farther and faster than heat. That's one reason why most fire victims die from inhalation of smoke and toxic gases; not from burns. Most fatal fires happen when families are asleep because occupants are unaware of the fire until there is not adequate time to escape. A smoke alarm stands guard around the clock, and when it first senses smoke, it sounds a shrill alarm. This often allows a family the precious, but limited, time needed to escape."¹

As a result, many Authorities Having Jurisdiction (AHJ) have been pushing for legislation that requires hard-wired smoke alarms in all new residential and commercial construction.

Power source issues have been the most common factor for smoke alarm failures, which is less prevalent in hardwired smoke alarms than in battery-powered units (82% to 94% of the time in fires large enough to trigger an alarm).

"In the 2011 American Housing Survey (AHS), three out of five (61%) respondents who reported having smoke alarms said their alarms were powered by batteries only; one-third (33%) said their alarms were powered by electricity and batteries; and 7% had alarms powered by electricity only. For many years, the NFPA 101®, *Life Safety Code*, and other codes, have required smoke alarms in new construction to be hardwired with battery backup."²

Keep in mind, too, that when installing smoke alarms, it is important to have one in each bedroom, outside each sleeping area, and on every level of the home, including the basement. For the best protection, interconnect all smoke alarms. This means when one smoke alarm sounds, they all sound. Testing smoke alarms at least once a month using their test buttons is also imperative.



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¹ Smoke Alarms – Why, Where, and Which? CPSC. <https://www.cpsc.gov/s3fs-public/SmokeAlarmWhyWhereandWhichCPSCPub5559RevisedJuly2016PostReview.pdf>.

² Smoke Alarms In U.S. Home Fires. NFPA. <http://www.nfpa.org/news-and-research/fire-statistics-and-reports/fire-statistics/fire-safety-equipment/smoke-alarms-in-us-home-fires>.