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FIRE SPRINKLER INITIATIVE
Bringing Safety Home



FIRE SPRINKLER INITIATIVE: BRINGING SAFETY HOME

Fires in the home pose one of the biggest threats to the people of your community. Over 350,000 home fires occur every year in this country and more than 2,500 people a year die in these home fires. Home fire sprinklers are a proven way to protect lives and property against fires at home.

These life-saving systems respond quickly and effectively to the presence of a nearby fire. When sprinklers are present, they save lives.

- If you have a reported fire in your home, the risk of dying decreases by about 80 percent when sprinklers are present.
- People in homes with sprinklers are protected against significant property loss—sprinklers reduce the average property loss by 71 percent per fire.

Model safety codes now require the use of home fire sprinklers in new one- and two-family homes. These requirements offer the highest level of safety to protect the people of your community.

- Home sprinkler systems respond quickly to reduce the heat, flames, and smoke from a fire, giving families valuable time to get to safety.
- Roughly 90 percent of the time, just one sprinkler operates.
- Each individual sprinkler is designed and calibrated to go off when it senses a significant heat change.
- Only the sprinkler closest to the fire will activate, spraying water directly on the fire.

FACTS ABOUT THE COST OF HOME FIRE SPRINKLERS

The Fire Protection Research Foundation recently issued the *Home Fire Sprinkler Cost Assessment* report. The report reveals that the cost of installing home fire sprinklers averages \$1.61 per square foot for new construction. Installing home fire sprinklers can:

- Reduce property loss in the event of fire
- Cut homeowner insurance premiums
- Help qualify a home for a tax rebate

FACTS ABOUT U.S. HOME STRUCTURE FIRES

U.S. fire departments responded to an estimated 362,500 home structure fires in 2009.

These fires caused:

- 2,565 civilian fire deaths
- 12,650 civilian fire injuries
- \$7.6 billion in direct damage

Roughly 85 percent of all civilian fire deaths in 2009 resulted from home structure fires.

On average, eight people a day die in U.S. home fires.

Sources:

Fire Loss in the United States during 2009
by Michael J. Karter, Jr., NFPA, Quincy, MA, August 2010

Home Structure Fires by Marty Ahrens,
NFPA, Quincy, MA, January 2009



The Fire Sprinkler Initiative®, a project of the National Fire Protection Association, is a nationwide effort to encourage the use of home fire sprinklers and the adoption of fire sprinkler requirements for new construction.
*Data referenced from NFPA, the Home Fire Sprinkler Coalition, and other sources.



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A PROJECT OF THE NATIONAL FIRE
PROTECTION ASSOCIATION

Myths vs Facts*

When considering home fire sprinkler requirements for your community, it is important to address key myths often raised by sprinkler opponents. The fact is, because automatic sprinkler systems have been commonly used in structures for many years, the evidence is clear that such systems are a proven way to protect lives and property against fires.

MYTH

"A smoke alarm provides enough protection."

FACT

Smoke alarms alert occupants to the presence of danger, but do nothing to extinguish the fire. Home fire sprinkler systems respond quickly to reduce heat, flames, and smoke from a fire, giving residents valuable time to get out safely. Smoke alarms reduce the risk of dying in a home fire by 50%. If you have a reported fire in your home, the risk of dying decreases by about 80% when sprinklers are present.

Beware misleading percentages on survival and death

Fire sprinkler opponents have been using a statistic of 99.45% to illustrate the effectiveness of smoke alarms in reducing home fire deaths. This NFPA statistic estimates the likelihood of surviving a home fire when a working smoke alarm is present.

A 100% chance of dying would mean that every fire is fatal, or, roughly, 100 deaths per 100 fires. Fortunately, that is not the case. The chances of surviving a reported home fire when working smoke alarms are present is 99.45% (100 minus 0.55) vs. 98.87% (100 minus 1.13) in home fires with no working smoke alarms. The first number is barely higher than the second.

The 99.45% vs. 98.87% statistic is based on "chances of survival" which is not the same thing as "risk of fire death" based on total number of reported fires. Chances of survival don't have much bearing in the discussion; preventing home fire death and reducing home fire death risk is the goal.

Consider this:

- Each year, there are an estimated 3,000 home fire deaths out of approximately 400,000 reported structure fires. Therefore, the likelihood of surviving a home fire is approximately 99% without regard to the presence of smoke alarms or any other fire safety provisions. Does that mean 3,000 deaths are acceptable? Most people would say no.

Important comparisons to the above

- Each year, there are an estimated 12,000 deaths due to falls in homes and an estimated 11 million fall injuries in the home. The likelihood of surviving a fall is 99.9%. Does that mean 12,000 deaths are acceptable? Most people would say no.
- Each year, there are an estimated 42,000 deaths due to motor vehicle crashes and an estimated 6 million reported motor vehicle crashes. The likelihood of surviving a motor vehicle crash is 99%. Does that mean 42,000 deaths are acceptable? Most people would say no.

MYTH

"Home fire sprinklers are expensive and will make housing unaffordable, especially for first-time buyers moving to our area."

FACT

The fact is, home fire sprinklers are affordable. The Fire Protection Research Foundation recently issued the Home Fire Sprinkler Cost Assessment report (PDF, 634 KB), which revealed that the cost of installing home fire sprinklers **averages \$1.61 per square foot for new construction**. To put the cost of a sprinkler system into perspective, many people pay similar amounts for carpet upgrades, a paving stone driveway, or a whirlpool bath.

Sales in many U.S. communities where sprinkler systems are available show that, not only are consumers requesting this feature, but also that houses with sprinkler systems are selling faster than those without. Installing home fire sprinklers can help residents: significantly reduce property loss in the event of fire; cut homeowner insurance premiums; help qualify home for a tax rebate; and help support local fire service efforts.

MYTH

"We don't need sprinkler mandates; home fire sprinklers should be a matter of consumer choice"

FACT

Every major model safety code now requires home fire sprinklers in new construction. In 2006 three major NFPA codes were revised to include the requirement for home fire sprinklers in new construction of one- and two-family dwellings. In 2008, the International Code Council voted to add a similar provision to the 2009 edition of *International Residential Code*. This occurred through a process properly vetted by both private and public concerns and not influenced by any single special interest group. The standard of home fire safety has been set.

National model codes represent minimum standards of safety to protect people in their homes. U.S. consumers expect that the products they buy, including their homes, come equipped with the minimum standards of safety. Minimum standards of safety are always included in the fixed cost of a product.

MYTH

"Home fire sprinklers often leak or activate accidentally."

FACT

Home fire sprinkler systems are much like home plumbing systems – when installed and maintained properly, there is a very low risk of leaks. Each individual sprinkler is designed and calibrated to activate only when it senses a significant heat change, directing water to the area of the fire. Over the last 50 years, records indicate the likelihood of leaks from automatic sprinkler systems is very remote.

MYTH

"If you want your home fire sprinklers to be reliable, they will need frequent, expensive maintenance."

FACT

The standard design for home fire sprinklers is much simpler than the design for more traditional sprinklers like the ones used in commercial buildings. If you install a home fire sprinkler system, the only "inspection and maintenance" you will need is to (a) walk around your home and make sure the sprinklers are not obstructed by something that would block the water coming out, and (b) avoid turning off the main control valve, which you don't normally operate anyway.

MYTH

"When a fire occurs, every sprinkler will activate and everything in the house will be ruined."

FACT

In the event of a fire, only the sprinkler closest to the fire will activate, spraying water directly on the fire, leaving the rest of the house dry and secure. Ninety percent of the time, just one sprinkler operates.

MYTH

"The water damage caused by the sprinkler system will be more extensive than fire damage."

FACT

Home fire sprinklers can significantly reduce property loss and damage due to a fire. The sprinkler will quickly control the heat and smoke from the fire, limiting damage to other areas of the house, giving residents valuable time to get out safely. Any resulting water damage from the sprinkler will be much less severe than the damage caused by water from fire-fighting hose lines. On average, home fire sprinkler systems use about eight times less water than fire hoses.

MYTH

"Home fire sprinkler systems are not practical in colder climates, as the pipes will freeze and cause water damage."

FACT

With proper installation, home sprinkler systems will not freeze in cold settings. NFPA13D sets forth guidelines on proper insulation to avoid pipes freezing. The Chicago area is a great example of a cold weather region where many jurisdictions have passed sprinkler mandates for new homes with limited to no problems with systems freezing.

MYTH

"Home fire sprinkler systems are unattractive and will ruin the aesthetics of our residents' homes."

FACT

Actually, new home fire sprinkler models are very unobtrusive, can be mounted flush with walls or ceilings, and can be concealed behind decorative covers.

MYTH

"Any time a smoke alarm goes off it will activate the home fire sprinklers."

FACT

This is incorrect. Each individual sprinkler is designed and calibrated to activate when it senses a significant heat change. They do not operate in response to smoke, burned toast, cooking vapors, steam, or an activating smoke alarm.



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