October 2017
Fire Prevention Month

Week 1: Fire Safety Importance

Week 2: National Fire Prevention Week

Week 3: "Get Low, Get Out"

Week 4: Halloween Safety

Events:

Fire Prevention Week Oct. 8th – 14th
Get Alarmed West Virginia Install Day – Oct. 14th

Educator Tips:

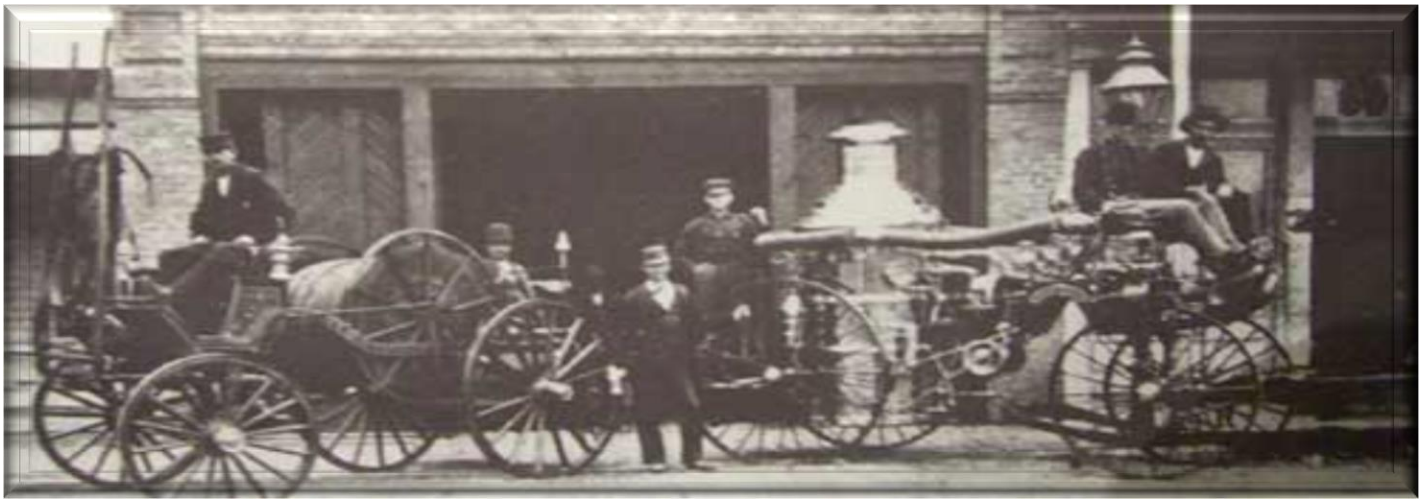
Fire Prevention Week is an important and historic week in the fire service, we use this week to give safety talks and provide information about the dangers of fire. Try to continue these programs throughout the entire year. Ask schools or community groups if they'd be interested in a spring or summer time fire safety reminder!

National Fire Service History:

- October 19, 1857 – Chicago Building Collapse (10 firefighters killed)
- October 8-9, 1871 – Great Chicago Fire (300 deaths)
- October 8, 1871 – Great Peshtigo Fire (1152 deaths)
- October 28, 1954 – PA Chemical Tank Explosion (12 firefighters killed)
- October 26, 1962 – New York Building Collapse (6 firefighters killed)
- October 17, 1966 – New York Mercantile Building Fire (12 firefighters killed)

WV Fire Service History:

- Oct. 3, 1935: A patient at Weston State Hospital started a fire in the main building that destroyed six men's wards and caused a cupola to fall through the roof. The building was repaired, and the hospital remained in service for nearly 60 more years



Fire Safety Importance

(from Fire Disasters: What Have We Learned?
By Francis L. Brannigan, SPFE and Harry R. Carter, Ph.D.)

The earliest recorded fire prevention efforts come from ancient Rome. It was surely noted after a major fire that something should have been done to prevent the disaster or at least, have somebody to protect the citizens. This may also be the earliest recorded uttering of the phrase, "How long has this thing been going on?"

Rome continued to tinker with its fire forces. When the slaves who were serving as the firefighting force became unruly, the response was to form the equivalent of what we now term a fire department. Once again, this was a reaction to a problem.

The pages of history are strewn with stories of great cities that were destroyed by fire:

London - 798, 982, 1212, 1666
Venice - 1106, 1577
Boston - 1631, 1653, 1679
Moscow - 1752
Rome - 1764
Chicago - 1871
Baltimore - 1904
San Francisco - 1906

Something important happened after each of the fires listed laid waste to a city: **improvements ensued**. The purpose of this article is to show that progress in the American Fire Service has been based upon a series of historic catastrophes. In the wake of each succeeding disaster, improvements were made.

Chicago has been the scene of many historic fires. The city was rebuilt following the 1871 conflagration. Improvements were made in construction styles and methods. By 1903, the Great Fire had become a fading memory to all, as the city was swept by succeeding waves of immigrants from the Old World.

The Iroquois Theater was one of the great entertainment venues in this thriving industrial center. It was one of the big stops on the vaudeville circuit, drawing the great performers of its day. So it was on Dec. 30, 1903, that the stage was set for another epic lesson in fire safety, one which would come at a great human cost.

The comedian Eddie Foy was starring in a matinee performance of the musical comedy, "Mr. Bluebeard." A standing-room-only audience estimated at 2,000 people crowded the theater. At some point during the performance, a spotlight overheated and burst into fire way up in the stagehand's overhead. The fire that ensued spread quickly through the flammable backstage rigging. Workers attempted to beat the fire out with sticks in a vain attempt to extinguish the blaze. A piece of flaming cloth fell to the stage.

In a vain attempt to calm the crowd, Foy had the band continue playing. Suddenly, a woman cried out and the audience made a mad dash for the exits. As the firemen moved in to extinguish the flame, they were met with a tangle of human bodies, all entwined and badly burned. The cause of death for many came from the terrible smoke and flames. Most, however, had been trampled and crushed in the rush to leave the hall. Authorities considered it a miracle that only 602 people succumbed to the fire.

The Iroquois Theater was built of fire-resistive materials. Experts agree that it was well-built, but they also point out that many important fire protection features were missing or inoperable at the time of the fire. These include:

- *Blocked asbestos curtains.*
- *Installed ventilators that were not in operation.*
- *Exits not properly marked.*
- *Exits blocked with draperies, wood and glass doors.*
- *No installed alarm system.*
- *No fire protection devices such as extinguishers and standpipes.*
- *No automatic sprinklers in the stage area, even though it was a municipal requirement.*

The investigation that followed led to a variety of fire safety improvements, all of which addressed the problems listed above. In fact, many cities still provide a uniformed firefighter or group of firefighters for major entertainment events. The fire service has long viewed old-style factory buildings as a serious fire hazard. Many of the worst fires during the late 1800s and early 1900s happened in factory buildings. Some are more famous than others.

A 1910 fire in a Newark, NJ, clothing factory killed 24 workers, and there were countless others. All had code-related problems at their heart. It is the 1911 fire at the Triangle Shirtwaist Company in New York City, however, that marked a turning point in how fire codes addressed this type of occupancy.

Chief Edward Croker of the New York Fire Department had long sought improvements in the building codes and factory laws, because of such early fires as the Parker Building. Three firemen were killed in a massive collapse within this 20-story fireproof building. His pleas fell on deaf ears and the resulting catastrophe, which killed scores of innocent young immigrants, will long live in the annals of firefighting lore.

The Triangle Shirtwaist Company was located at 23 Washington Place in lower Manhattan. The work force was primarily made up of young, female immigrants, who labored under classic "sweatshop" conditions. More than 500 workers were jammed into the eighth and ninth floors of the 10-story building, which was supposedly built from fire-resistive materials.

It was about 4:45 P.M. on Saturday, March 25, 1911. A fire started in a rag bin on the eighth floor. It spread rapidly through the mix of combustible cloth, and soon cutting tables and other fixtures were ablaze. One group of workers grabbed the standpipe hoseline and attempted to extinguish the fire. They quickly found that the hose was rotted and the valves frozen shut. Word of the fire soon began to pass through the workers jammed into the loft building. Workers surged toward the exits with which they were familiar. They were met with a wall of fire racing up the stairs. Others moved toward another exit, but were blocked by a locked door. When they were finally able to force it, they found that it opened inward.

By this time, there were so many people pushing toward the door that the door was jammed shut; people began piling up at this point. Very few workers knew that the freight elevator was still working. A number of young girls faced with the prospect of a horrible death by fire chose to leap to their deaths from windows on the eight and ninth floors. Others managed to make it to the roof, and a small number were able to make their way over ladders to the New York University Law School next door.

Bells in New York fire stations began to toll the alarm. But the problems were many. The streets were littered with bodies, making apparatus placement difficult. Ladders could not reach the fire or the roof.

Once lines were in position, the fire was quickly extinguished. The horrible toll was 146 people who leaped to their deaths or were burned or crushed to death in the panic. The public was outraged. This fire had proved Croker correct. More was needed than just fire suppression.

After an intense investigation, a number of changes were instituted. A new bureau of fire prevention was created in the fire department. Labor laws were passed outlawing many of the practices which led to the fire. And in the wake of this tragedy, work began on the codes which eventually led to what we know today as the National Fire

Protection Association's Life Safety Code. The ironic part of this story is that the building remained in use for decades after this tragedy.

Schools have never been immune to fire tragedy. Three of great historical interest are:

Lakeview Grammar School in Collinwood, OH (176 dead).
The New London Consolidated School in Texas (294 dead).
Our Lady of the Angels School in Chicago (95 dead).

These fires occurred for different reasons. In Ohio, it was a cellar fire of unknown origin that roared up the main stairway of the school, trapping the existing students and killing them. They only knew one way out. The fire department was not trained or equipped to fight a fire in the school.

The victims of the Texas fire were killed in a massive gas explosion. Later investigation indicated that questionable construction, installation and maintenance processes involving the building's heating system appeared to be the culprit in this disaster.

The fatal fire in the Our Lady of the Angels School began as a small trash fire in the basement. This fire then raced up the main stairway and trapped students in the corridor and in their rooms on the third floor. As a sad footnote, many students were found seated at their desks, heads down, as if praying.

Each of these fires led to improvements which benefit schoolchildren all over North America:

- *Exit drills are mandatory;*
- *Construction practices are according to code;*
- *More school inspections in most places;*
- *Greater emphasis on installed fire protection, alarms, and first-aid firefighting equipment*.

There are also a number of classic fires in places of public assembly that have led to upgrades in fire and life safety. Some of them are:

1919 - Dance Hall, Via Platt, LA (25 dead).
1929 - The Glen Motion Picture Theater in Paisley, Scotland (70 dead).
1940 - Rhythm Club, Natchez, MS (198 dead).

1942 - The Cocoanut Grove, Boston (491 dead).
1977 - Beverly Hills Supper Club, Southgate, KY (164 dead).
1990 - Happy Land Social Club, Bronx, NY (87 dead).

In each one of these cases, people died in great numbers because fire safety issues were either ignored or never fully addressed.

The Cocoanut Grove was a one-story nightclub that had been built during the Prohibition era. It was a popular site and was constantly jammed with customers. The night of Nov. 28, 1942, was no different. The official occupancy was supposed to be 600, but estimates from that fateful night ranged as high as 1,000. A small fire started in the basement lounge and quickly raced through the area. Most people knew only the main entrance which they always used. As the crowd surged toward the exit, it quickly became jammed. Fire department sources listed nearly 200 people as being found in this area alone. All told, 491 people were killed by fire, smoke, heat or the effects of being trampled.

Members of the Boston Fire Department were on the scene quickly, as a full alarm response had been made to a nearby area for a box alarm that turned out to be a car fire. The fire quickly escalated to five alarms, but the damage had been done. What was learned from this fire?

- *Combustible materials must not be used for decorations or in building components.*
- *Occupancy limit requirements should be strictly enforced.*
- *Exits need to be kept clear of obstructions and plainly marked.*
- *Public assembly buildings must have two separate means of egress, remote from each other.*
- *Exit doors should swing in the direction of egress traffic flow.*

The Beverly Hills Supper Club fire more than three decades later exposed us to a fire the likes of which was thought to be a thing of the past. This club was a major regional entertainment center, with many of the country's top entertainers appearing in its lounges. The building was originally erected in 1937. A 1970 fire occurred prior to the building being remodeled. Further expansion occurred in 1974, when the large Cabaret Room was created. It should be pointed out that automatic sprinkler, alarm and kitchen hood fire protection was not installed during any of the construction phases.

Fire struck the club on May 28, 1977. The facility was crowded with patrons who hoped to attend one of the John Davidson shows, which were scheduled for 8:30 and 11:30 P.M. At about 8:45 P.M., employees discovered a fire in

the Zebra Room. There appears to have been about a 15-minute delay in notifying the fire department. During this time, employees attempted to extinguish the fire themselves.

Many people stated that the first time they noted a problem was when they noticed a large number of people suddenly leaving the building. There was no building fire safety plan, so word of the fire was spread from person to person. The evacuation appeared to be calm until thick, dark clouds of choking smoke engulfed the exit access areas. One hundred sixty-four people were killed in a tragedy that never should have occurred. The lessons learned in 1942 were not remembered.

The list of causes included:

- *No installed fire protection.*
- *No fire safety plan.*
- *Blocked exits.*
- *Crowd in excess of the occupancy load.*
- *Inadequate exit capacity.*
- *Combustible wall coverings.*
- *Toxic smoke generated by burning electrical wiring*.

The Happy Land Social Club fire in 1990 had all of the same issues of crowding, inadequate exit capacity and a lack of installed fire protection. What that situation also had was a human being bent on revenge who killed scores of people.

A hot, humid July day greeted the 7,000 people who had chosen to attend the special matinee program of the Ringling Brothers-Barnum & Bailey Circus in Hartford, CT on July 6, 1944. The extra session had been scheduled owing to the late arrival of the circus a day earlier.

The circus owned a large number of portable extinguishers and water buckets, but they had not been placed around the area. There was one strong negative that went undetected by local fire authorities. While the large main tent had been well cared for, it had been waterproofed in a very dangerous manner. It had been coated with a covering of paraffin that had been thinned by using gasoline. Thus the whole circus was held under a highly flammable covering. As the second act was about to begin, a small spot of flame was observed by an on-duty Hartford policeman. Slowly the fire spread up the tent, gaining speed as it heated the fuel which lay just ahead. At about the same time, the circus band leader saw the fire and quickly had the band switch to playing the famous Sousa march, The Stars and Stripes Forever. This is the traditional circus alarm call. As the fire grew in intensity, the tent area became a scene of sheer terror and pandemonium. People were pushing toward the main exit, animals were running loose, and burning tent was falling all around.

When the flames were finally extinguished, 168 people lay dead; more than half of these children. In the wake of this tragic fire, a number of changes were made to improve circus and outdoor event fire safety:

The National Fire Protection Association (NFPA) formed a technical committee to deal with problems of this nature. The result of this effort led to the development of NFPA Standard 102, Grandstands, Folding and Telescopic Seating, Tents and Membrane Structures.

- *Tent tops and tarps must be made from fire-resistive materials.*
- *Tents are relegated to a temporary role.*
- *Tents must be properly spaced so that they are not too close to one another.*
- *Life Safety Code compliance is mandated.*
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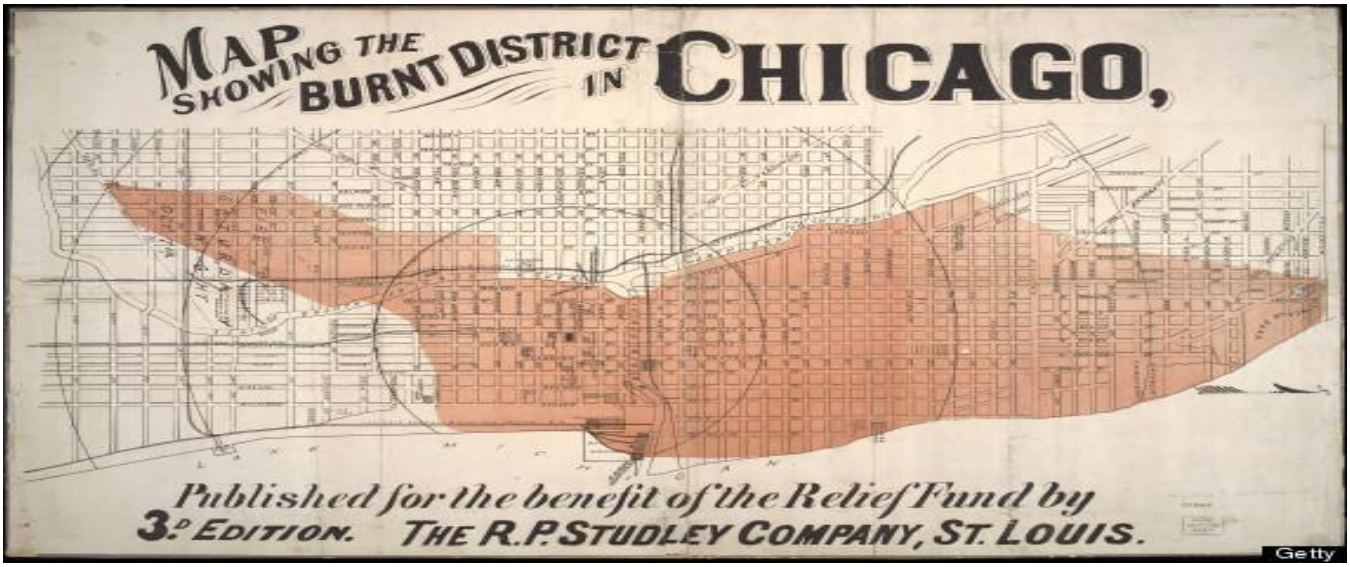
Fire Prevention Week

Fire Prevention Week was established to commemorate the Great Chicago Fire, the tragic 1871 conflagration that killed more than 250 people, left 100,000 homeless, destroyed more than 17,400 structures and burned more than 2,000 acres. The fire began on October 8, but continued into and did most of its damage on October 9, 1871.

According to popular legend, the fire broke out after a cow - belonging to Mrs. Catherine O'Leary - kicked over a lamp, setting first the barn, then the whole city on fire. Chances are you've heard some version of this story yourself; people have been blaming the Great Chicago Fire on the cow and Mrs. O'Leary, for more than 130 years. But recent research by Chicago historian Robert Cromie has helped to debunk this version of events.

Like any good story, the 'case of the cow' has some truth to it. The great fire almost certainly started near the barn where Mrs. O'Leary kept her five milking cows. But there is no proof that O'Leary was in the barn when the fire broke out - or that a jumpy cow sparked the blaze. Mrs. O'Leary herself swore that she'd been in bed early that night, and that the cows were also tucked in for the evening.

But if a cow wasn't to blame for the huge fire, what was? Over the years, journalists and historians have offered plenty of theories. Some blamed the blaze on a couple of neighborhood boys who were near the barn sneaking cigarettes. Others believed that a neighbor of the O'Leary's may have started the fire. Some people have speculated that a fiery meteorite may have fallen to earth on October 8, starting several fires that day - in Michigan and Wisconsin, as well as in Chicago.



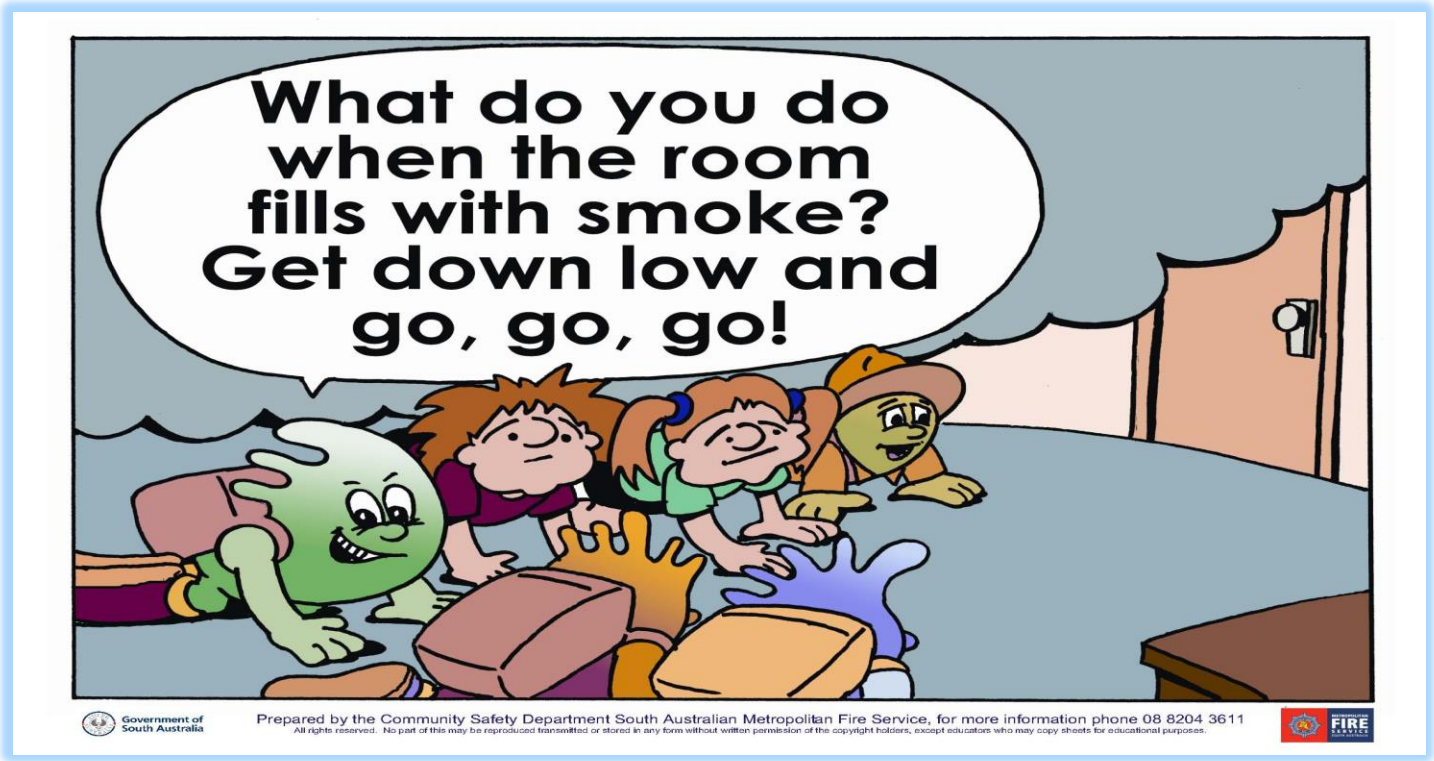
While the Great Chicago Fire was the best-known blaze to start during this fiery two-day stretch, it wasn't the biggest. That distinction goes to the Peshtigo Fire, the most devastating forest fire in American history. The fire, which also occurred on October 8th, 1871, and roared through Northeast Wisconsin, burning down 16 towns, killing 1,152 people, and scorching 1.2 million acres before it ended.

Historical accounts of the fire say that the blaze began when several railroad workers clearing land for tracks unintentionally started a brush fire. Before long, the fast-moving flames were whipping through the area 'like a tornado,' some survivors said. It was the small town of Peshtigo, Wisconsin that suffered the worst damage. Within an hour, the entire town had been destroyed.

Those who survived the Chicago and Peshtigo fires never forgot what they'd been through; both blazes produced countless tales of bravery and heroism. But the fires also changed the way that firefighters and public officials thought about fire safety.

On the 40th anniversary of the Great Chicago Fire, the Fire Marshals Association of North America (today known as the International Fire Marshals Association), decided that the anniversary of the Great Chicago Fire should henceforth be observed not with festivities, but in a way that would keep the public informed about the importance of fire prevention. The commemoration grew incrementally official over the years.

In 1920, President Woodrow Wilson issued the first National Fire Prevention Day proclamation, and since 1922, Fire Prevention Week has been observed on the Sunday through Saturday period in which October 9 falls. According to the National Archives and Records Administration's Library Information Center, Fire Prevention Week is the longest running public health and safety observance on record. The President of the United States has signed a proclamation proclaiming a national observance during that week every year since 1925.



"Get Low, Get Out"

(from Gizmodo.com)

To know how to best escape a fire, you need to think like a fire. You need to know what a fire needs to survive, grow and spread throughout a structure in order to maximize your chances of successful escape.

For a fire to start, three elements must be present: a heat source to provide the initial catalytic energy, such as spark or cinder; plenty of oxygen; and any sort of combustible as a fuel source. In the US, cooking remains the primary source of home fires, and the primary source of fire-related injury. Dropped cigarettes, on the other hand, have been the number one source of fire-related deaths since 2005. Fun Fact: Men started 64 percent of the fires in 2010 and caused nearly double the property damage ($4.8 billion vs $2.7 billion caused by women).

Once ignition occurs, a fire will continue to burn and spread as long as it has a continuous supply of fuel and oxygen. It will always spread into cooler areas following the flow of heat, and it doesn't take long for heat to spread. On average, a house fire can raise the interior temperature to over 1100-degrees F in just 3.5 minutes—note that your goose is cooked, quite literally, at 350 F. And in five minutes, the air in a room can get so hot that everything in it spontaneously combusts, a phenomenon known as flashover, even if actual flames are not present. That means *you and yours are working with roughly a 210 second window of opportunity*.

When it comes to home fire response, live by the Boy Scouts of America motto. Taking the proper preventative measures and knowing what to do if a fire does break out can help minimize damage and maximize your chances of survival.

Prevention is as easy as being aware of your surroundings.

However, if a fire starts when your family is asleep, it may burn out of control before you become aware of it. In case this occurs, every family member should learn and memorize at least two potential exits from every room in the house—the normal route for entering and exiting (typically through the front door) as the primary route as well as an alternative door or window. Study each escape route for potential hazards such as sticky window, security bars that require tools to open, or heavy furniture, and adjust these routes accordingly. And remember,

even with every light in the house on, a structure fire can create blackout conditions within the home in just four minutes. So make the outside routes as direct as possible.

Also be sure to assign which able bodies will be in charge of helping the very young, the elderly, and pets to escape. In addition, stick a pet rescue alert on any clean glass surface near the front door to alert first responders to your pets' existence. If you have children, you must impress upon them the importance of using an alternate escape route if the primary is blocked and not hiding in a closet or under the bed. Explain that this will make it much harder for firefighters to find them. And once you've created a plan, practice it with your kids.

Another helpful habit is for everyone to shut their bedroom doors at night. This not only gives you more privacy, but can also delay the spread of fire and smoke into the room by as much as twenty minutes. What's more, fire alarms will still detect smoke with the door closed.

Fires and people compete for the same vital resource: oxygen. But people are at a disadvantage because a lack of oxygen makes us dumb and sleepy—two qualities you really don't need when escaping the flames. The official FEMA fire safety manual explains the effects of a low oxygen environment:

21% Oxygen Level— Normal atmospheric level.
19.5% Oxygen Level — Minimum healthful level.
15-19% Oxygen Level — Decreased stamina and coordination.
12-14% Oxygen Level — Breathing rate increases with exertion, increase in heart rate, impaired coordination, perception, and judgment.
10-12% Oxygen Level — Breathing further increases in rate and depth, lips turn blue. Poor judgment.
8-10% Oxygen Level — Mental failure, fainting, unconsciousness, nausea, and vomiting.
6-8% Oxygen Level — Fatal after 6 to 8 minutes.
4-6% Oxygen Level — Coma in 40 seconds, convulsions, respiration ceases, and death occurs.

The lack of oxygen isn't the only gaseous danger you'll face. As fires expand, they generate thick plumes of acrid, toxic black smoke that obscures your vision and wreaks havoc on your lungs. Carbon monoxide, for example, is an odorless and highly-stupefying gas, causing mental impairment on par with alcohol intoxication when inhaled in even modest amounts. If you're already asleep when a fire breaks out, spreading CO gas can drop you into such a deep slumber that not even the intense heat of approaching flames will be enough to rouse you (a fire alarm, however, will). In fact, more people die each year from smoke inhalation than do from the actual flames.

There's a silver lining to these clouds of noxious gasses—the heat of the fire forces them all to rise, which clears a low area of relatively clean air to breathe near the floor. So, as Arnold Schwarzenegger put it, "**GET DOWN**." If you're in bed when the fire alarm sounds, roll out of bed and onto the floor before crawling quickly to your primary exit option. If that option is your bedroom door (which should be closed), check it before you open it by placing the back of your hand against the door itself, the knob, and the crack on the hinged side next to the frame. If any of those points feel warm, bail on that exit strategy and immediately move on to your secondary option. And even if they're cool, brace your shoulder against the door before you twist the handle to prevent the door from blowing open due to air pressure differences on either side.

If you need to travel through a smoke-filled room to reach safety, you can further protect yourself from damaging gasses by wrapping a piece of cloth around your mouth and nose to help filter larger smoke and soot particulates. Wetting the wrap will add further protection.

If you find both your primary and secondary routes cut off, look for a window. If you have to break the pane to open it, smash out the lower corners with a blunt, heavy object, then cover the exposed edges with clothing, bedding or cushions before going through. If you're on the ground floor, toss a few cushions out to help break your landing. If you need to get your family out of a second story window, lower your kids as far as possible before dropping them to a waiting adult below.

All your hard work and planning will be for naught if someone is left behind and no one realizes that they are still in danger. That's why you need a designated meeting spot outside the house. It should be safely away from danger but close enough for everyone to reach quickly.

If you do realize that someone is missing, do not reenter the home to look for them. You are not a firefighter. Do not try to do a firefighter's job, if you do, the real firefighters will more than likely be pulling two bodies from the ashes.

Once everyone is accounted for, get medical attention for anyone that needs it. Look for signs of oxygen deprivation—ie, your eight-year-old is stumbling around like a wee drunkard. Once the fire is under control, ask the fire firefighters or a neighbor for help notifying your insurance company, emergency contacts, or the Red Cross for emergency lodging

Halloween Safety

Children dressed in costumes excitedly running door to door to trick-or-treat, festive decorations like glowing jack-o-lanterns, paper ghosts and dried cornstalks adorning front porches – these are some of the classic hallmarks of Halloween that make the holiday special for kids and adults alike.

Unfortunately, these Halloween symbols and activities can also present lurking fire risks that have the potential to become truly scary. But by planning ahead, you can help make this Halloween a fire-safe one. Taking simple fire safety precautions like keeping decorations far away from open flames and using battery-operated candles or glow-sticks in jack-o-lanterns can help ensure your holiday remains festive and fun.

Halloween by the numbers

- From 2009-2013, decorations were the item first ignited in an estimated average of 860 reported home structure fires per year.
- Nearly half of decoration fires in homes occurred because the decorations were too close to a heat source.
- These fires caused an estimated average of one civilian death, 41 civilian injuries and $13 million in direct property damage per year.
- Forty-one percent of these incidents were started by candles; one-fifth began in the living room, family room, or den.

Safety Tips:

- When choosing a costume, stay away from long trailing fabric. If your child is wearing a mask, make sure the eye holes are large enough so he or she can see out.
- Provide children with flashlights to carry for lighting or glow sticks as part of their costume.
- Dried flowers, cornstalks and crepe paper catch fire easily. Keep all decorations away from open flames and other heat sources like light bulbs and heaters.
- Use a battery-operated candle or glow stick in jack-o-lanterns. If you use a real candle, use extreme caution. Make sure children are watched at all times when candles are lit. When lighting candles inside jack-o-lanterns, use long, fireplace-style matches or a utility lighter. Be sure to place lit pumpkins well away from anything that can burn and far enough out of the way of trick-or-treaters, doorsteps, walkways and yards.
- Remember to keep exits clear of decorations, so nothing blocks escape routes.
- Tell children to stay away from open flames including jack-o-lanterns with candles in them. Be sure they know how to stop, drop and roll if their clothing catches fire. (Have them practice, stopping immediately,

dropping to the ground, covering their face with the hands, and rolling over and over to put the flames out.)

- Use flashlights as alternatives to candles or torch lights when decorating walkways and yards. They are much safer for trick-or-treaters, whose costumes may brush against the lighting.
- If your children are going to Halloween parties at others' homes, have them look for ways out of the home and plan how they would get out in an emergency.