



Home (https://www.denvergov.org/Home) / Government (https://www.denvergov.org/Government) / Agencies, Departments, and Offices (https://www.denvergov.org/Government/Agencies-Departments-Offices) / Fire Department (https://www.denvergov.org/Government/Agencies-Departments-Offices/Agencies-Departments-Offices-Directory/Fire-Department) / Safety Information (https://www.denvergov.org/Government/Agencies-Departments-Offices/Agencies-Departments-Offices-Directory/Fire-Department/Safety-Information) / Home Fire Safety

# **Home Fire Safety**

and injury rates in the world. According to the <u>US</u>
<u>Consumer Product Safety Commission</u>
(<a href="http://www.cpsc.gov/">http://www.cpsc.gov/</a>), fire is the second leading cause of accidental death in the home. More than 4,000 people die each year in home fires. Every year, there are more than 500,000 residential fires serious enough to be reported to fire departments. More than 90 percent of residential fire deaths and

The United States has one of the highest fire death

More than 90 percent of residential fire deaths and injuries result from fires in one and two family houses and apartments. Property losses exceed 4 billion dollars annually, and the long term emotional damage to victims and their loved ones

Residential Emergency Guide
 (https://www.denvergov.org/content/dam/denvergov/Portals/678/documents/safety-information/ResidentialEAPHANDOUT.pdf)

is incalculable.

- Residential Low Rise Evacuation Guidelines -September 2017
   (https://www.denvergov.org/content/dam/denvergov/Portals/678/documents/FPB/RESIDENTIAL%20Low-Rise%20Evacuation%20Guidelines%209-2017.pdf)
- Multifamily Properties Inspection Checklist
   (https://www.denvergov.org/content/dam/denvergov/Portals/678/documents/safety-information/InspectionChecklist-Multifamily\_Properties-11.118.pdf)
- Safe Use of Long Term Oxygen Therapy Policy
   (https://www.denvergov.org/content/dam/denver gov/Portals/678/documents/FPB/Safe Use Oxy gen Therapy Policy-3.1.18.pdf)



Fire Watch Codes and Information for Building
 Owners and Management
 (https://www.denvergov.org/content/dam/denvergov/Portals/678/documents/FPB/Fire Watch Codes and Information for Building Owners Management-11-22-2017-2.pdf)

## Smoke Alarms

Smoke alarms save lives. Almost two-thirds of home fire deaths resulted from fires in homes with no smoke alarms or no working smoke alarms. When there is a fire, smoke spreads fast and you need smoke alarms to give you time to get out.

#### Safety tips

- Install smoke alarms in every bedroom, outside each separate sleeping area and on every level of the home, including the basement. Interconnect all smoke alarms throughout the home. When one sounds, they all sound.
- An ionization smoke alarm is generally more responsive to flaming fires, and a photoelectric smoke alarm is generally more responsive to smoldering fires. For the best protection, both types of alarms or a combination alarm (photoelectric and ionization) should be installed in homes.
- Test alarms at least monthly by pushing the test button.
- Smoke rises; install smoke alarms following manufacturer's instructions high on a wall or on a ceiling. Save manufacturer's instructions for testing and maintenance.
- Replace batteries in all smoke alarms at least once a year. If an alarm "chirps", warning the battery is low, replace the battery right away.
- Replace all smoke alarms, including alarms that use 10-year batteries and hard-wired alarms, when they are 10 years old or sooner if they do not respond properly.
- Be sure the smoke alarm has the label of a recognized testing laboratory.
- Alarms that are hard-wired (and include battery backup) must be installed by a qualified electrician.
- If cooking fumes or steam sets off nuisance alarms, replace the alarm with an alarm that has a "hush" button. A "hush" button will reduce the alarm's sensitivity for a short period of time.
- An ionization alarm with a hush button or a photoelectric alarm should be used if the alarm is within 20 feet of a cooking appliance.
- Smoke alarms that include a recordable voice announcement in addition to the usual alarm sound, may be helpful in waking children through the use of a familiar voice.
- Smoke alarms are available for people who are deaf or hard of hearing . These devices use strobe lights. Vibration devices can be added to these alarms
- Smoke alarms are an important part of a home fire escape plan.

## Fire Extinguishers

A portable fire extinguisher can save lives and property by putting out a small fire or containing it until the fire department arrives; but portable extinguishers have limitations. Because fire grows and spreads so rapidly, the number one priority for residents is to get out safely.

## How to Use a Fire Extinguisher

(https://www.denvergov.org/content/dam/denvergov/Portals/678/documents/FPB/safetyinformation/HowTo UseAFireExtinguisher-ProvidedbyDenverFireDept.pdf) (PDF)

#### Safety tips:

- Use a portable fire extinguisher when the fire is confined to a small area, such as a wastebasket, and is not growing; everyone has exited the building; the fire department has been called or is being called; and the room is not filled with smoke.
- To operate a fire extinguisher, remember the word PASS:
  - Pull the pin. Hold the extinguisher with the nozzle pointing away from you, and release the locking mechanism.
  - Aim low. Point the extinguisher at the base of the fire.
  - Squeeze the lever slowly and evenly.
  - **S**weep the nozzle from side-to-side.
- For the home, select a multi-purpose extinguisher (can be used on all types of home fires) that is large enough to put out a small fire, but not so heavy as to be difficult to handle.
- Choose a fire extinguisher that carries the label of an independent testing laboratory.
- Read the instructions that come with the fire extinguisher and become familiar with its parts and operation before a fire breaks out. Local fire departments or fire equipment distributors often offer hands-on fire extinguisher trainings.
- Install fire extinguishers close to an exit and keep your back to a clear exit when you use the device so you can make an easy escape if the fire cannot be controlled. If the room fills with smoke, leave immediately.
- Know when to go. Fire extinguishers are one element of a fire response plan, but the primary element is safe escape. Every household should have a home fire escape plan and working smoke alarms.

## **Fire Extinguisher Types**

There is no official standard in the United States for the color of fire extinguishers, though they are typically red, except for Class D extinguishers, which are usually yellow, and water, which are usually silver, or white if water mist. Extinguishers are marked with pictograms depicting the types of fires that the extinguisher is approved to fight. In the past, extinguishers were marked with colored geometric symbols, and some extinguishers still use both symbols. The types of fires and additional standards are described in <a href="https://www.nfpa.org/">NFPA</a> (<a href="http://www.nfpa.org/">http://www.nfpa.org/</a>) 10: Standard for Portable Fire Extinguishers, 2007 edition.

Fire Class	Geometric Symbol	Pictogram	<u>Intended Use</u> ( <u>http://en.wikipedia.org/wiki/Fire_classes)</u>
А	Green Triangle	Garbage can and wood pile burning	Ordinary solid combustibles
В	Red Square	Fuel container and burning puddle	Flammable liquids and gases
С	Blue Circle	Electric plug and burning outlet	Energized electrical equipment
D	Yellow Decagon (Star)	Burning Gear and Bearing	Combustible metals
K	Black Hexagon	Pan burning	Cooking oils and fats

The <u>Underwriters Laboratories (http://www.ul.com/)</u> rate fire extinguishing capacity in accordance with UL/ANSI 711: Rating and Fire Testing of Fire Extinguishers. The ratings are described using numbers preceding the class letter, such as 1-A:10-B:C. The number preceding the A multiplied by 1.25 gives the equivalent extinguishing capability in gallons of water. The number preceding the B indicates the size of fire in square feet that an ordinary user should be able to extinguish. There is no additional rating for class C, as it only indicates that the extinguishing agent will not conduct electricity, and an extinguisher will never have a rating of just C.

#### **Choosing The Right Fire Extinguisher For your Home**

The there are many types of Fire Extinguishers, the most common home fire extinguisher is the ABC fire extinguisher. This means that it can be used to put out fires in all three of these categories. The ABC extinguisher contains an extinguishing agent and uses a compressed, non-flammable gas as a propellant.

Extinguishers are also rated by their size, which indicates how much extinguishing product is in the extinguisher and how long it will typically discharge the extinguishing agent before it is empty (this should be noted on the label). Your home extinguisher should be of the 2, 5, or 10 pound capacity. The two pound extinguisher is going to be effective only on very small fires. These are often decorative extinguishers for the kitchen and may only be rated for Type B or C fires. You will want to purchase a 5 or 10 pound extinguisher. You will be able to put out a small fire in your home and it will be of the size and weight that will make it easy to use.

## Choosing The Right Place For Your Fire Extinguisher In Your Home.

A fire extinguisher should be placed on each floor in your home. Make sure they are not accessible to small children. You should place one in or near your Kitchen, Garage and/or Home Workshop. Since a potential fire in these locations could be larger than in the living space of the home, have a Fire Extinguisher in these places can be key to extinguishing a small fire. Each extinguisher should be installed in plain view near an escape route and away from potential fire hazards such as heating appliances.

ref: www.nfpa.org (http://www.nfpa.org/)

#### Aluminum Electrical Wiring

Between 1965 and 1973, aluminum wiring was used to install electrical branch circuits in about 1.5 million homes in the United States. The National Fire Protection Association and U.S. Consumer Products Safety Commission have found that homes using aluminum wires manufactured before 1972 are 55 times more likely to have one or more electrical connections reach "fire hazard" condition than homes wired with copper.

Aluminum wiring in itself is not dangerous. When properly installed, it can be just as safe as copper. But if it has not been installed properly, the connections—where the wires join to the outlets and switches—can present a fire hazard.

## Balcony Grills and Barbecues

Denver's Fire Code consists of the International Fire Code and specific Denver Amendments to that code. The base International Fire Code does not permit barbecues on balconies, period--no exceptions. However, the Denver Amendments do allow barbecuing on balconies with small, controllable amounts of fuel. Click here for a copy of <a href="mailto:this:code-section/amendment">this code-section/amendment</a>. (<a href="https://www.denvergov.org/content/dam/denvergov/Portals/678/documents/FPB/downloadable-">https://www.denvergov.org/content/dam/denvergov/Portals/678/documents/FPB/downloadable-</a>

forms/Barbeques-on-Balconies-Mgrs-and-owners-of-multi-family-dwellings-12-11-12.pdf)

For new construction, we encourage developers to put natural gas connections for barbecue grills into new residential complexes. For existing buildings, the Denver Amendments provide an exception by which people can barbecue with a 1-lb. cylinder of propane (enough for two or three cooking sessions) and one extra 1-lb. bottle. No permit is required. Charcoal barbecues are not allowed on any building balconies.

#### **Grill Fires - National Report**

In April 2010 The Federal Emergency Management Agency's (FEMA) United States Fire Administration (USFA) issued a special report, <u>Grill Fires on Residential Properties</u> (<a href="http://www.usfa.fema.gov/downloads/pdf/statistics/v11i1.pdf">http://www.usfa.fema.gov/downloads/pdf/statistics/v11i1.pdf</a>).

"Grills, hibachis, and barbecues on residential properties continue to be a high fire risk," said Kelvin J. Cochran, United States Fire Administrator. "It is crucial that households be mindful of fire safety when using these pieces of equipment, especially as the summer season approaches."

According to the report, which is based on 2006 to 2008 data from the National Fire Incident Reporting System (NFIRS), an estimated 5,700 grill fires on residential properties occur annually in the United States, resulting in an estimated average of 10 deaths, 100 injuries, and \$37 million in property loss.

Over half (57 percent) of grill fires on residential properties occur in the four months of May, June, July, and August and almost half (49 percent) of these fires occur during the hours of 5 to 8 p.m. In addition, 32 percent of grill fires on residential properties start on patios, terraces, screened-in porches, or courtyards, while an additional 24 percent start on exterior balconies and unenclosed porches. Finally, propane is the power source in 69 percent of all grill fires on residential properties.

Contact Fire Prevention Division at 720-913-3474 or <a href="denfpb@denvergov.org">denfpb@denvergov.org</a> (mailto:denfpb@denvergov.org) if you have any safety concerns about outdoor grills.

Even though portable fire pits and chimineas are fashionable and widely offered for sale in garden centers and home stores, open burning of wood (or any products other than propane, natural gas, or charcoal briquettes) is outlawed in Denver without permits from the Denver Department of Environmental Health and the Fire Prevention and Investigation Division.

This regulation stems from the years of Denver's "brown cloud" and the area's subsequent efforts to maintain clean air standards. (Please note that home barbeques using propane, natural gas or charcoal briquettes, are exempt.)

If you would like to pursue open burning, you must obtain permits from two different agencies (special requirements for each agency will be listed on the permit itself):

- -Fire Prevention and Investigation Division please see <u>Fire Safety Permits</u> (<a href="https://www.denvergov.org/content/denvergov/en/fire-department-home/permits-licensing/fire-safety-permits.html">https://www.denvergov.org/content/denvergov/en/fire-department-home/permits-licensing/fire-safety-permits.html</a>).
- -<u>Denver Department of Environmental Health (https://www.denvergov.org/deh/)</u> 720-865-5452 Open burning permits are rarely issued to individuals, and permits are never issued for chimineas. If you do obtain permits for open burning in a qualifying outdoor fireplace for a special event, the permits from both agencies indicating their approval must be posted on site and a variety of requirements must be met.

# Holiday Safety Tips

The year-end holiday season--Hanukkah, Christmas, Kwanzaa, New Year's--is also fire season, a prime time for residential fires. Decorative lights, combustible decorations, candles, special cooking, home decorating, parties where people drink and smoke and, most of all, the onset of the heating appliance season, all increase the likelihood of a fire.

View our <u>Holiday Safety Tips</u> (https://www.denvergov.org/content/dam/denvergov/Portals/678/documents/FPB/downloadable-forms/Holiday%20Safety.pdf).

## Residential Safety Equipment Report and Requirements

The City and County of Denver requires that all homes have functioning smoke detectors, carbon monoxide detectors and fire extinguishers--devices that have proven effective nationally in reducing the risk of death in home fires. Although the Denver Fire Department does not typically enforce the installation, inspection and maintenance of smoke detectors, carbon monoxide detectors and fire extinguishers in single family residences (structures designed for human habitation by persons comprising a single family) we do strongly recommend and urge those living in single family homes to install and maintain these proven life safety devices. Read the **Residential Fire Safety Handout** (https://www.denvergov.org/content/dam/denvergov/Portals/678/documents/safety-information/Residential Fire Safety Handout.pdf), which explains the requirements.

If you are a resident or an owner/manager of a multi-family residence, such as an apartment house or a condominium association, there are special requirements for periodic testing and reporting of these systems for multi-family residences. If you are a tenant at a multi-family residence, then you will need to inform your HOA/Management company that you have inspected your smoke alarms and CO (carbon monoxide) detectors and have replaced the batteries (unless the management is doing the required maintenance for you). Download and read the **Residential Fire Safety Equipment Report** (https://www.denvergov.org/content/dam/denvergov/Portals/678/documents/safety-information/Residential Safety Equipment Report.pdf) and annually provide the completed report to your HOA/management company. If you are an HOA/owner/or management company, then you will need

(https://www.denvergov.org/content/dam/denvergov/Portals/678/documents/safety-information/Smoke Detector Certificate of Compliance.pdf) verifying that you have reminded your tenants and owners of their responsibility to check their smoke alarms or CO detectors, or that you have entered the property and have performed this maintenance to the life safety devices yourself.

# **Create an Emergency Escape Plan**

to fill out a Certificate of Compliance

In 2007, there were an estimated 399,000 reported home structure fires and 2,865 associated civilian deaths in the United States. Fire can spread rapidly through your home, leaving you as little as two minutes to escape safely once the alarm sounds. Your ability to get out depends on advance warning from smoke alarms, and advance planning — a home fire escape plan that everyone in your family is familiar with and has practiced.

# Facts and Figures

- Only one-fifth to one-fourth of households (23%) have actually developed and practiced a home fire escape plan to ensure they could escape quickly and safely.
- One-third of American households who made an estimate thought they would have at least 6 minutes before a fire in their home would become life-threatening. The time available is often less. And only 8% said their first thought on hearing a smoke alarm would be to get out!

# Creating a Plan

• Pull together everyone in your household and make a plan. Walk through your home and inspect all possible exits and escape routes. Households with children should consider drawing a floor plan of your home, marking two ways out of each room, including windows and doors. Also, mark the location of each smoke alarm. For easy planning, review and download information from the National Fire Protection Association's (NFPA) website: <a href="How to make a home fire escape plan">How to make a home fire escape plan</a> (<a href="https://www.nfpa.org/Public-Education/Staying-safe/Preparedness/Escape-planning">https://www.nfpa.org/Public-Education/Staying-safe/Preparedness/Escape-planning</a>). This is a great way to get children involved in fire safety in a non-threatening way. Install smoke alarms in every sleeping room, outside each sleeping area and on every level of the home. NFPA 72, National Fire Alarm Code requires interconnected smoke alarms throughout the home. When one sounds, they all sound.

- Everyone in the household must understand the escape plan. When you walk through your plan, check to make sure the escape routes are clear and doors and windows can be opened easily.
- Choose an outside meeting place (i.e. neighbor's house, a light post, mailbox, or stop sign) a safe distance in front of your home where everyone can meet after they've escaped. Make sure to mark the location of the meeting place on your escape plan.
- Go outside to see if your street number is clearly visible from the road. If not, paint it on the curb or install house numbers to ensure that responding emergency personnel can find your home.
- Have everyone memorize the emergency phone number of the fire department. That way any member of the household can call from a neighbor's home or a cellular phone once safely outside.
- If there are infants, older adults, or family members with mobility limitations, make sure that someone is assigned to assist them in the fire drill and in the event of an emergency. Assign a backup person too, in case the designee is not home during the emergency.
- If windows or doors in your home have security bars, make sure that the bars have emergency release devices inside so that they can be opened immediately in an emergency. Emergency release devices won't compromise your security but they will increase your chances of safely escaping a home fire.
- Tell guests or visitors to your home about your family's fire escape plan. When staying overnight at other people's homes, ask about their escape plan. If they don't have a plan in place, offer to help them make one. This is especially important when children are permitted to attend "sleepovers" at friends' homes. See NFPA's information about: <a href="Staying Safe">Staying Safe</a> (<a href="https://www.nfpa.org/Public-Education/Staying-safe">https://www.nfpa.org/Public-Education/Staying-safe</a>).
- Be fully prepared for a real fire: when a smoke alarm sounds, get out immediately. Residents of high-rise and apartment buildings may be safer "defending in place."
- Once you're out, stay out! Under no circumstances should you ever go back into a burning building. If someone is missing, inform the fire department dispatcher when you call. Firefighters have the skills and equipment to perform rescues.

# Putting Your Plan to the Test

- Practice your home fire escape plan twice a year, making the drill as realistic as possible.
- Make arrangements in your plan for anyone in your home who has a disability.
- Allow children to master fire escape planning and practice before holding a fire drill at night when they are sleeping. The objective is to practice, not to frighten, so telling children there will be a drill before they go to bed can be as effective as a surprise drill.
- It's important to determine during the drill whether children and others can readily waken to the sound of the smoke alarm. If they fail to awaken, make sure that someone is assigned to wake them up as part of the drill and in a real emergency situation.
- If your home has two floors, every family member (including children) must be able to escape from the second floor rooms. Escape ladders can be placed in or near windows to provide an additional escape route. Review the manufacturer's instructions carefully so you'll be able to use a safety ladder in an emergency. Practice setting up the ladder from a first floor window to make sure you can do it correctly and quickly. Children should only practice with a grown-up, and only from a first-story window. Store the ladder near the window, in an easily accessible location. You don't want to have to search for it during a fire.
- Always choose the escape route that is safest the one with the least amount of smoke and heat but be prepared to escape under toxic smoke if necessary. When you do your fire drill, everyone in the

family should practice getting low and going under the smoke to your exit.

- Closing doors on your way out slows the spread of fire, giving you more time to safely escape.
- In some cases, smoke or fire may prevent you from exiting your home or apartment building. To prepare for an emergency like this, practice "sealing yourself in for safety" as part of your home fire escape plan. Close all doors between you and the fire. Use duct tape or towels to seal the door cracks and cover air vents to keep smoke from coming in. If possible, open your windows at the top and bottom so fresh air can get in. Call the fire department to report your exact location. Wave a flashlight or light-colored cloth at the window to let the fire department know where you are located.

#### **Contact Us**

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Appointment Needed
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For Non-Emergencies: 3-1-1 or 720-913-1311

Additional Contact Info (https://www.denvergov.org/content/denvergov/en/fire-department-home/contact-us.html)