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## FIRE IN THE UNITED STATES

- The U.S. has one of the highest fire death rates in the industrialized world. For 1998, the U.S. fire death rate was 14.9 deaths per million population.
- An average of 4,400 Americans lost their lives and over 25,100 were injured annually as the result of fire.
- About 100 firefighters are killed each year in duty-related incidents.
- Each year, fire kills more Americans than all natural disasters combined.
- Fire is the third leading cause of accidental death in the home. At least 80 percent of all fire deaths occur in residences.
- About 2 million fires are reported each year. Many others go unreported, causing additional injuries and property loss.
- Direct property loss due to fires is estimated at \$8.6 billion annually.

## WHERE FIRES OCCUR

There are nearly 2 million fires each year in the United States. Of these:

- 41% were fires outside of a building
- 29% were inside buildings
- 22% were vehicle fires
- 8 % were fires of other types

Residential fires represent 22 percent of all fires and 74 percent of structure fires.

Fires in 1-2 family dwellings most often start in the:

- Kitchen 23.5%
- Bedroom 12.7%
- Living Room 7.9%
- Chimney 7.1
- Laundry Area 4.7%

Apartment fires most often start in the:

- Kitchen 46.1%
- Bedroom 12.3%
- Living Room 6.2%
- Laundry Area 3.3%
- Bathroom 2.4%

80 percent of all fatalities occur in the home. Of those, approximately 85 percent occur in single-family homes and duplexes.

## **CAUSES OF FIRES AND FIRE DEATHS**

Cooking is the leading cause of home fires in the U.S. It is also the leading cause of home fire injuries. Cooking fires often result from unattended cooking and human error, rather than mechanical failure of stoves or ovens.

Careless smoking is the leading cause of fire deaths. Smoke alarms and smolder-resistant bedding and upholstered furniture are significant fire deterrents.

Furnace and heater fires are the second leading cause of residential fires and the second leading cause of fire deaths. However, heating fires are a larger problem in single family homes than in apartments. Unlike apartments, the heating systems in single family homes are often not professionally maintained.

Arson is both the third leading cause of residential fires and residential fire deaths. In commercial properties, arson is the major cause of deaths, injuries and dollar loss.

## **WHO IS MOST AT RISK**

- Senior citizens age 70 and over and children under the age of 5 have the greatest risk of fire death.
- The fire death risk among seniors is more than double the average population.
- The fire death risk for children under age 5 is nearly double the risk of the average population.
- Children under the age of 10 accounted for an estimated 17 percent of all fire deaths in 1996.
- Men die or are injured in fires almost twice as often as women.
- African Americans and American Indians have significantly higher death rates per capita than the national average.
- Although African Americans comprise 13 percent of the population, they account for 26 percent of fire deaths.

## **WHAT SAVES LIVES**

- A working smoke alarm dramatically increases a person's chance of surviving a fire.
- Approximately 88 percent of U.S. homes have at least one smoke alarm. However, these alarms are not always properly maintained and as a result might not work in an emergency. There has been a disturbing increase over the last ten years in the number of fires that occur in homes with non-functioning alarms.
- It is estimated that over 40 percent of residential fires and three-fifths of residential fatalities occur in homes with no smoke alarms.
- Residential sprinklers have become more cost effective for homes. Currently, few homes are protected by them.

Practice two ways out of every room to mimic the most difficult fire situation you might encounter. Be sure to practice your escape plan during the day and at night.

Assign an adult to wake and assist each child in the house. Also consider lending extra help to family members who are physically challenged or elderly.

Identify a meeting place outside the home.

Practice, practice, practice—at least twice every year.

## **Family Fire Safety Plan**

### **1. Fire Escape Plan**

It is a good idea to have a set of instructions on how to deal with a fire emergency in your home. As a family, discuss various emergencies and develop plans for how the family members are to deal with them. Survival rates increase in homes that have emergency plans. A home evacuation plan should have a floor plan of your home and include the following:

- A floor plan of your home. Include the following:
  - Primary and secondary exit route from each room. The primary route should be directly to the outside such as through the window.
  - The location of any fire equipment
  - Mark the area where everyone is to meet once they are outside of the house.
  - Mark the location of utility shut-off switches and valves.

### **2. Fire Escape Routes**

Physically check the exit routes to be sure that anyone, who will need to use them, can use them. This will clarify the need for things like escape ladders, ramps, security grill release mechanisms for protected doors and windows, and the availability of keys for double key locks. Further, check that all windows can be opened sufficiently to escape through them, and that everyone understands how to open and lift off window well covers.

### **3. Fire Escape Drill**

Go over the plan with the entire family. Make sure that everyone understands that they are not to go back into the house or apartment once they are out. Go to the meeting area and wait.

### **4. How to Escape in A Fire**

- A. Before leaving a room that has a closed door, use your hand to feel if the door is hot. Do not open the door if it is hot.
- B. You will be safer if you stay low during a fire. Smoke will tend to rise and it will be hotter the higher you are.
- C. If you are trapped in a room, put a towel, blanket or other pieces of cloth at the bottom of a door. Open a window if it is safe to do so.
- D. Make certain everyone knows what the smoke detector sounds like.

## **General Fire Knowledge**

The first thing to consider when formulating a plan is to have some method of being made aware of the danger. Smoke detectors are simple, automatic devices to provide that notification. You may also consider providing each bedroom with a whistle of some sort as a manual method of notifying the family to get out.

Sleeping with the doors closed provides barriers between those you love and a night time fire in your home. The average household door will last approximately three to five minutes with a fully involved room. Closed doors have saved many lives by giving people the time to escape. Sometimes, people with small children or infants think that leaving, the door at night will enable them to hear in case their children cry or call out. In a fire the open door may allow toxic gases to enter the rooms and render both the parents and the children unconscious before any of them are aware of the problem. Inexpensive devices not only allows monitoring other rooms, but in some cases, communicating with them.

**At the sound of the alarm or if you suspect that there is a fire in your home, get out!** If you reach a closed door, feel it before opening. If it is hot, don't open it. Try to use a direct exit to the outside. If the door is cool to the touch, open it cautiously, keeping the door between you and the opening. Stay low and be prepared to close it quickly if heat or smoke is present. In the event that you must move through smoke, stay low, on hands and knees crawling quickly to the nearest exit. If you must break a window because it won't open, you can use a heavy object. Use it to punch out all of the glass starting from the top. Scrap the bottom edge of the window to remove fragments that may be sticking up and could injure you. Placing a blanket, pillow or article of clothing on the sill before you climb out provides additional protection.

Evacuation from a two story home or a second floor apartment can be a little more difficult. Consider is the purchase of an escape ladder. They are all designed to attach quickly to a windowsill. (Available for three story buildings) It is important that every member of the family practice with the ladder.

In a two-story building, You must go out the window without a ladder, lower yourself out of the window feet first, facing the building. Hang down from the windowsill at arm's length, let go and drop to the ground. In this position in your average residence, an adult's feet are within six or seven feet of the ground.

## **Your Home Address**

You should make certain that your address is on your building in number big enough to be easily seen from the street. The reason for this becomes very evident on those occasions when you have called 911 because you need help and your help is delayed because of difficulty in locating you because there is no address on the house is hidden or too small to read. You want them to find you, and find you quickly. It is always a good idea to send someone outside to meet the Fire Department to guide them to the emergency. This is especially true if you live in a large apartment complex with only one address for many units or even buildings.

## **Security Bars**

Where security devices are used on windows and doors, it is important to remember that whatever keeps others from entering your home, can keep you and those you love from getting out. Make sure that everyone in the family knows how to use any release devices in the event of an emergency. Bars on windows should have quick release devices if they are installed on windows in a room where someone sleeps. Make sure that everyone in the home knows how to use any release devices in the event of an emergency. Test these devices at least twice a year to make sure they are working properly. Doors that require a key to open them from either side when they are locked should have the keys left in them on the interior side at night. Someone getting to that door without a key, or dropping a key in the smoke may never get out. Regardless of how you got out of the building, go to the predetermined meeting place. Remember, if there is a fire in your home, get out and stay out. Practice your plan and take it seriously.

## **APARTMENTS**

If there is a fire in your apartment, get everyone out first and confine the fire by closing the doors. Turn in the alarm to both the building and the Fire Department. The same steps that were taken in a house should be followed in an apartment fire. It is important to slow the fire spread so other people will have time to evacuate the building should that becomes necessary. In this case, notification includes notifying the other tenants as well as the Fire Department. This may be done by activating the fire alarm system if the building has one, or by knocking on doors if that is the only way to let them know.

If you hear an alarm or smell smoke, but do not know where the fire is, evacuate but be cautious. Go out the door after feeling to see if it is hot. If it is hot, don't open it. Try another way, or if there is no other way, follow the advice given under what to do if you are trapped. Also remember that if you don't know where the fire is, it could be below you. Check every closed door that you have to open, including fire doors in the hallway and stairway doors. There could be fire on the other side. **Never use an elevator!**

Become familiar with your building. Learn where all the stairways are located and in the case of buildings three or more stories in height, find out which stairways give you the most options. For instance, some stairways have two doors at the bottom, one that goes into the building and one that goes directly to the outside. Some stairways go to the roof, some don't. In some buildings this can be a practical escape option. In multistory buildings in the City of Los Angeles you should find signs in the stairwell landings that will give you this information. Also you should know how to operate the fire alarms if the building is equipped with them. Fire doors in the halls should never be blocked open for any reason. These doors are to provide a barrier between you and a fire. If they are open, you lose that protection. This is also true of doors leading to the stairways. Open fire doors aid in the spread of the fire, fill hallways and stairways with smoke and heat and make escape difficult or impossible.

## **Types of Fire Extinguishers**

Each extinguisher is required to have a label from the Underwriters Lab., or Factory Mutual Testing Lab. The Underwriters Laboratory labels are identified by the letters UL

in a circle. Once you find the label look for the word "classification." On the right side or just below this, you will see a series of numbers and letters. For example you may see "2-A:10-BC." Remove the numbers and what you have are the letters "ABC", this is the designation of the class of fire(s) the unit is to be used on. The numbers may be different but you still read them the same, i.e., 60-BC would be for class B & C fires only.

#### **WATER - TYPE**

Stainless steel, weighs about 35 lbs., holds 2 1/2 gals., it will reach up to about 35 ft., and will last approx. 1 minute. Class "A" only. It cannot be used on electrical or flammable liquid fires. This type works better as a spray by putting your finger over the end of the nozzle.

#### **DRY CHEMICAL - RECOMMENDED**

The best general purpose extinguisher. Comes in "BC" or "ABC" (multipurpose). Available in different sizes. It has a range of 8 to 12 ft. It will empty in 10 to 20 seconds. This is an excellent choice for home use. It can be messy when used, but it is nontoxic. We recommend all homes have at least two dry chemical-type fire extinguishers (at least one per floor) with a minimum size rating of **2A-10BC**, including an earthquake restraining strap, a hose-type nozzle, and a metal head.

#### **CARBON DIOXIDE (CO2)**

These are "BC" only. It is a gas that smothers the fire. They do not have a gauge. They reach about 2 to 5 ft., you have to get fairly close to the fire. For that reason always give a test shot before committing to the fire. Do not hold the cone-shaped nozzle because it may freeze to your hand.

#### **Classifications of Fires**

"A"-type fires are common combustibles, i.e., wood, paper, cloth

"B"-type fires are flammable liquids, i.e., gas, oil, grease

"C"-type fires are electrically energized fires, i.e., computers, toasters, heaters, appliances

#### **Placement of Fire Extinguishers**

- Keep an extinguisher in every part of your home where fire might occur-especially in the kitchen, living room and laundry room.
- Read the instructions and know how to use your extinguishers before a fire breaks out.
- The only time a fire extinguisher should be used to fight a fire is when:
  - The fire is small
  - Self-contained
  - Not spreading rapidly
  - The fire department has been notified
  - There is a clear exit behind the person using the extinguisher
  - And the extinguisher is used to create a safe pathway out of the home.
- Respect all fires, regardless of size. Fire extinguishers are one part of a fire response plan. The main objective is safe escape.

- Replace your fire extinguishers every 12 years.

## **Use of a Fire Extinguisher**

Follow the PASS Rules

- P – Pull The Pin
- A – Aim The Fire Extinguisher
- S – Squeeze The Handle
- S – Sweep At The Base Of The Fire

Remember, most fire extinguishers only last 10-20 seconds, so make certain that you have an escape route if the fire extinguisher becomes exhausted.