



Home Fire Protection

Housing Fact Sheets

Introduction

The National Fire Protection Association (NFPA) collects and compiles information about how and where fires occur in the United States. The most recent information collected by the NFPA indicates that:

- **Of all building fires in the United States, 70% occur in residential buildings.**
- **The two leading causes of fire in residential structures occur from heating and cooking activities.**
- **80% of all fire deaths and 67% of all fire injuries occur in residential building fires.**
- **Most fatal fires in residential structures occur between midnight and 8:00 AM.**
- **Careless smoking is the leading cause of fatal residential structure fires.**



These facts tell us that we are more likely to be threatened by fire in our home than anywhere else. They also tell us that the hours between midnight and 8:00 AM are a particularly dangerous time for fire to strike. This is a time when household members are likely to be taken by surprise, thus increasing the chance of confusion and panic. We can use this knowledge to help protect ourselves, members of our household and our property from fire.

The basic steps listed in this fact sheet are designed to minimize the risk of fire in your home and to ensure the safety of household members in the event a fire does occur.

Plan And Practice What To Do In An Emergency

Planning and practicing what to do in an emergency enhances our ability to act quickly and decisively. This will help protect our safety if an emergency situation does occur.

- Plan two escape routes for each household member and then organize a fire drill. Have each person practice until they can quickly exit the house following these routes. Pay special attention that children and elderly adults understand and can easily follow their assigned escape routes.
- Establish a common meeting place a safe distance from the building where all household members can meet and be quickly accounted for.
- Be certain that each person understands that, if necessary, any hard, heavy object can be used to break a stuck window for escape.
- Have escape ladders available for use on upper floors.
- Notify your local fire department about any household members that have a disability that may hinder their escape in case of a fire.
- Be sure that all household members, (including temporary members such as baby-sitters) know the fire call telephone number and the fire escape plan.

If You Awake To Fire In Your Home

- If you smell smoke or see flames, get down on the floor and crawl to the nearest escape route. Smoke and heat rise, leaving the cooler, cleaner air near the floor.
- Feel the backs of interior doors with a hand before opening. If it's hot, do not open it! Use an alternate escape route instead.

Provide An Early Warning System; Install Smoke Detectors

Smoke detectors are designed to provide an early warning when smoke and toxic combustion gases are being emitted in the initial stages of a fire. A properly installed and maintained smoke detector can alert you to a fire, even as you sleep. The National Fire Protection Association suggests that a smoke detector be located on each floor of the house, as well as outside each sleeping area, with no detector being further than ten feet from each bedroom. Smoke detectors should be mounted on the ceiling, at least four inches away from any wall.



- In a mobile home environment, smoke detectors are a critical element of home fire safety.
- Smoke detectors in your home should be tested at least once a month to make certain they are working properly. Install new batteries at least once a year in detectors that use them. Choosing a specific day, such as New Year's Day, to do this each year is a helpful way to remember.

Fire Prevention

Since we know that heating and cooking are the two major causes of fire in homes, and that careless cigarette smoking is the leading cause of fatal fires, pay special attention to fire prevention practices in these areas.

Home Heating Systems

- Gas and oil-fired equipment should be checked by a competent mechanic before the start of each heating season.
- Chimneys and furnaces should be cleaned annually.
- Fireplaces should be equipped with a fire screen or approved glass doors to protect against flying sparks.
 - Be certain that dampers are in proper working order.
 - Do not leave fires unattended.
- Wood or coal stoves should be placed on a fireproof material to protect the floor from flying embers when tending the stove.
 - Follow all stove manufacturers' recommendations concerning proper installation and clearance requirements.
 - Check the stove pipe and chimney monthly for the build up of creosote.
- Electrical heaters should have damaged cords replaced immediately.
- Heat producing electric appliances such as curling irons, clothes irons and soldering irons should be allowed to cool before they are put away.
- Kerosene and other liquid fuel heaters should be allowed to cool before being refueled.
 - Refuel heaters outside where spills won't cause a fire hazard.
 - Use only the fuel recommended by the manufacturer.

- Space heaters should be placed at least three feet from walls, furniture, curtains, or any other combustible material.
 - Turn space heaters off when leaving home or going to bed.

Cooking

Unattended cooking is the leading cause of cooking related fires. Use this information to protect you and members of your household by avoiding leaving the kitchen for extended periods of time when cooking. Other safety tips to be aware of are:

- Setting a timer is a good way to remind yourself to check the stove or oven when cooking or baking.
- Towels and pot holders should not be left near cooking surfaces.
- Avoid having curtains on windows that are near cooking surfaces, or attach curtains in such a way that they won't be blown against burners or hot pans.
- A fire in a pan can be extinguished quickly placing the cover on it and turning the burner off.

Smoking and Use of Matches

- Keep all matches out of the reach of children.
- Never smoke in bed or when you are sleepy
- Have plenty of large deep ashtrays throughout the home.
- Do not smoke while pouring gasoline into the tank of a lawn mower, gasoline lantern, etc.

Storage

Stored items made of combustible materials present a serious fire hazard.

- Do not store combustible materials near a furnace, water heater, chimney, or other sources of ignition.
- Store old papers and magazines in cans or place in a carton for frequent collection.
- Avoid accumulations of stored items, especially on basement and attic floors. Instead, place items on racks and shelves.

Electric Cords

Properly sized electric extension cords should not overheat while in use. If an electric cord that is in use feels warm to your touch it is being overloaded. This will eventually cause the insulation around the wires to melt, thus creating a serious fire hazard.

Heat Tapes

Heat tapes are electric cables, which when plugged into an electrical outlet produce heat. They are designed to be wrapped around pipes to protect them from freezing in cold weather. Improper installation of heat tapes can cause fires. To decrease the risk of fire from heat tapes:

- Carefully read and follow all manufacturers instructions when installing heat tapes.
- Heat tape should never be wrapped over itself or touch itself when installed.
- Check heat tapes at the start of each heating season and frequently while in use. If cracks or other signs of deterioration of the electrical insulation are evident, replace the heat tape immediately.
- Be aware that one type of heat tape is designed for use on metal pipe while a different type is designed for use on plastic pipe. It is extremely important that heat tapes be used only on the pipe material they are designed for.
- Never install heat tapes over thermal insulation or near flammable objects.

Use Home Fire Protection Equipment

Fire Extinguishers

There are three classes of fire extinguishers, they are designated A, B, or C, according to the types of fire they are designed to extinguish. Class A fires involve wood, paper, grass, clothes, and similar materials and can be put out with water. Class B fires involve gas, oil, grease, or other liquids and must be extinguished with a foam. Class C fires involve live electrical equipment and require a non-conducting extinguisher such as dry powder or carbon dioxide. Combination ABC fire extinguishers are also available. Combination extinguishers will put out all the various fires listed above. They use a dry chemical and are recommended by the National Fire Protection Association as being well suited to extinguish small fires that may erupt in the home.

Location of Home Fire Extinguishers

The National Fire Protection Association suggests the following areas as good choices for locating fire extinguishers in your home.

- between the living and sleeping areas

- kitchen area
- main bedroom
- head of basement stairs

Concluding Note

This fact sheet has listed basic information to help decrease the chance of a fire occurring in your home and to ensure a safe exit if a fire does occur. Remember the three basic steps of home fire safety

- **1) Have an escape plan and practice it**
- **2) Minimize fire hazards**
- **3) Provide an early warning system by installing smoke detectors**

For Further Information

If you are interested in further information about fire protection for your home contact your local fire department. Information is also available from:

New York State Department of State
Office of Fire Prevention and Control
162 Washington Avenue
Albany, NY 12231
(518) 474-6746

Other fact sheets available from your local Cooperative Extension on home fire protection are FS-1: Early Warning Fire Alarms.

References

National Fire Protection Association, Fire Protection Handbook, Quincy Massachusetts, 1991.

Baker, D. Stewart, L. Early-Warning Fire Alarms: -Fact Sheet FS-1. Northeast Regional Agricultural Engineering Service, Riley-Robb Hall, Cornell University, Ithaca, NY 14853.

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