# ESCAPE from HOME FIRES

L. D. Baker, Extension Safety Engineer, Cornell University

Most children are helpless to save themselves in a fire. Through lack of knowledge and practice, they make deadly mistakes, Children have rushed into smokefilled hallways or down burning stairways when they could have gone safely out a window. Some don't even try to escape. They wander in bewilderment or panic. Many hide in closets or under beds.

Youngsters could have a much better chance of escape if parents would take a few minutes to show them how. When fire strikes at night your family will **not** get a second chance. Everyone must act quickly, correctly and automatically. A child who has practiced what to do when fire occurs is much less susceptible to panic and has a better chance of survival.

# **Be Prepared**

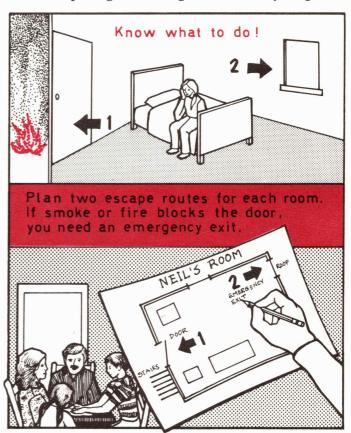
Many home fires start between midnight and six a.m. when the family is asleep and least prepared. Buy and install **smoke detectors** near your sleeping areas. This alarm will alert you and your family if fire does break out and will give you time to escape.



Involve the whole family in a discussion of an **escape plan**. Draw a rough diagram of the house or apartment and map out two separate escape routes from every room in the house. Pay special attention to escape from bedrooms where fire is most likely to trap you. Don't depend entirely on stairways as these may be filled with heat

and deadly smoke, making passage impossible.

Your best alternate escape route might be through a window, perhaps one that opens onto a garage deck or porch roof. Even if you can't get to the ground from there, you can usually wait safely in the fresh air for rescue. For isolated windows with no landing you could use a sturdy trellis or provide a fire escape ladder. A knotted rope might be all right for athletic youngsters.



Decide who will help young children and elderly or infirm members of the family. Plan where you will meet after the escape, so no one risks going back inside for someone who is already safe. Youngsters may want to draw a copy of the fire escape plans and regulations to post in their rooms.

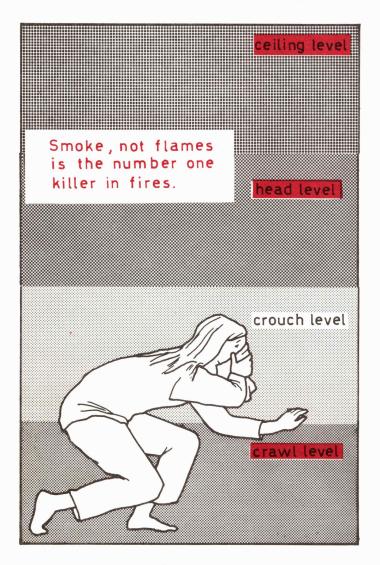
Emphasize that if you discover fire: first, alert everyone so they can begin their escape. Second, call the fire department after you get to a safe place. The number of the fire department should be permanently posted in

a prominent place near your phone. You might write what to say when the call is answered — your address and how to get there, particularly if you live in a rural area. Third, fight the fire only if you can do it safely with the proper extinguishing material.

# **Smoke and Poisonous Gases**

Smoke, not flames, is the Number One Killer in fire. Smoke contains large quantities of carbon monoxide. Burning synthetic materials produce many other poisonous gases. By far the majority of fire victims are killed by gases in the smoke long before flames ever touch them. Sometimes poisonous smoke can knock the victim unconscious after two or three breaths and kill in a few minutes. Smoke rises making upper floors, where bedrooms are often located, the greatest traps. Be sure children know that wherever there is smoke, there is potential for death—so get to fresh air fast.

Never fling open a bedroom door if you suspect fire. Apply this test: put your hand on the door panel and



knob. If either is warm, do not open the door. Heat and gases are on the other side ready to burst in. Leave the door closed and make your escape another way. If the door does not feel warm, brace yourself against it, open it a crack and be ready to slam it shut should smoke or heat rush in. If all is clear, proceed through the doorway with caution.

If a door is open and you decide to exit through a window, close the door before you open the window. Fresh air from the window could fan the flames.

Poisonous gases accumulate near the ceiling and floor of a burning building. Crouch low with a handkerchief or cloth over your mouth and nose as you escape. The cloth over the face will help relieve some of the irritating effects of inhaled smoke although it won't filter out poisonous gases. Avoid deep breathing.



# **Drills**

There is value in captivating a child's imagination concerning fire safety. Young children, especially, benefit from the fire drills. In the first two drills, stress immediate escape. The second two drills teach principles of how fire works and fire prevention awareness.

### Drill 1. Find a Mask

A drill called "Find a Mask" teaches children about poisonous gases which are the true killers in fires.

Pretend the house is filling with smoke and that you must get out as quickly as possible. Yell "Smoke!" and have the children, wherever they are — in bedrooms, living room, kitchen — grab a pillow or several thicknesses of fluffy material such as a towel and place it over their mouths and noses. Never use a plastic bag. Then have the children move as fast as they can, in crouch position. They should avoid deep breaths.



### **Drill 2. Get Out Fast**

A drill called "Get Out Fast" trains youngsters in the importance of a quick escape. A child's first impulse in fires should always be to get out, even though the blaze may be small, for it can become an inferno in minutes. Have them lie on their beds and then sound the alarm. Time them to see how long it takes to reach the meeting place outside the house. At first, let them escape the simplest way. Remind them to test doors before opening them. Then make them go through obstacles imitating a smoke filled area or "hot" door. Block off stairways with a string so they know to use an alternate route.

Where possible, practice going out a window. Discuss with children the possibility and methods of breaking a window if necessary. Children have learned to be careful of windows and probably would not consider breaking one, even in an emergency. A blanket thrown over the window sill will reduce risk of injury from broken glass.



If they use a rope ladder, have them throw it out the window and actually climb down. If they are to wait on a roof until someone comes with a ladder, make them wait while you get the ladder. They must behave exactly as they would in a real fire.

### **Drill 3. Firefighting Skills**

To understand how fire can be controlled, first be familiar with three factors which must be present for fire to burn. These are **air** (oxygen), **fuel** (something that will burn), and **heat** (something to ignite and to continue burning).

Air Fuel Heat

If any one of the factors is removed from a fire, it will go out.

Discuss with your children the three classes of fires that occur in the home and the best way to deal with these fires.

**Class A** fires involve ordinary combustibles such as wood, cloth, paper, rubber, straw, and hay. Water is the best extinguishing agent for these fires.

**Class B** fires involve such things as grease, burning oil, paint or flammable liquid. Class B fires are extinguished by oxygen exclusion or flame interrupting (chain breaking).

**Class C** fires involve electrical wiring and equipment. Water should not be used on electrical fires because of the shock hazard.

If you own a fire extinguisher know which class of fire it is designed to fight, keep it properly maintained and instruct older children how to use it. Consider purchasing an ABC all-purpose extinguisher which is designed to extinguish all types of home fires.

Although a child may never fight fire extensively, quick action could save lives or property. Familiarity with safe practices will reinforce calm decisive action from both adults and children.

### 1. Clothing Fires

Teach children exactly what to do if their clothes catch fire. Let them pretend they are on fire and have them roll up in a blanket, rug, large towel or the quickest thing available to smother the flames. Emphasize that they should never run if clothes are burning because the breeze fans the flames

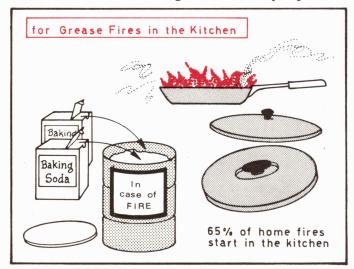


### 2. Ordinary Combustibles

Stage a small paper or wood fire in the backyard—in a box, barbeque pit or trash burner—where you can control it. Show youngsters how to put it out with a bucket of water or a hose. A coarse spray nozzle is better than a steady stream. Remind children that they should never try a fire demonstration without adult supervision.

### 3. Grease Fires

Familiarize youngsters with the use of baking soda (sodium bicarbonate) and the frying pan lid which are both useful in smothering a kitchen grease fire. You might have them prepare a special can of baking soda for the kitchen, labelling its use as a fire extinguisher. **Never** substitute flour as an extinguisher as it may explode.



### 4. Water as an Extinguisher

Teach children that while water is the best extinguisher for ordinary combustibles, it should never be used on electrical equipment because of the shock hazard or on a grease fire because it may spatter, spreading the flames.

### 5. Fighting a Fire Is Your Third Priority

First get the people out; second, turn in an alarm giving the correct name and location, then fight the fire only if you can do so safely with the extinguishing material at hand.

### **Drill 4. Fire Safety Inspection**

Fire prevention is the most economical and practical method to prevent fires. Take a few minutes and check your prevention program. Have your family do an inspection.

Does the fireplace have a screen?

Are oily rags discarded or kept in metal containers? Are your home and service buildings free of litter and rubbish?

Are the yards and lots free of weeds, tall grass, brush, trash?

Is wiring adequate and have you inspected it lately? Are all electrical cords in good repair?

Have you allowed the proper ventilation space around television and stereo equipment?

Are you careful not to store cookies and goodies above the stove?

Are flammable liquids and fuels properly stored and used?—i.e. in metal air-tight containers?

Are combustible materials stored away from heat sources and pilot lights?

If you smoke, are you always careful?

Do your children respect fire and not play with matches?

If you have a wood stove, is it properly installed and regularly cleaned of creosote buildup?

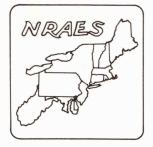
These questions are a few reminders of the things you can do to prevent fires. With both prevention and protection you have fire safety.

## Don't Let Your Children Burn

To determine whether your children qualify as "firefighters," put them through the recommended "fire drills" in this series. They might get a toy firefighters' badge, fire truck or other reward, symbolizing their new status and achievement.

As a further project, the family can visit their local fire department. Available firefighters are glad to show their equipment to visitors. Even then, don't let this be the end. Children need "refresher courses" and much practice to make escape from fire an automatic response.

It may be possible for your children to participate in a youth fire safety program at school, through a 4H program or the scouts. Contact your county 4H extension office for details about the 4H fire safety program.



NRAES is an activity of the Cooperative Extension Services of the Northeast Land Grant Universities and the United States Department of Agriculture

University of Connecticut • University of Delaware • University of Maine • University of Maryland University of Massachusetts • University of New Hampshire • Rutgers University • Cornell University Pennsylvania State University • University of Rhode Island • University of Vermont • West Virginia University

Headquarters are located at Riley-Robb Hall, Cornell University, Ithaca, N.Y. 14853

Cooperative Extension Provides Equal Program and Employment Opportunities