

## THIS IS FIRE

A Factsheet on the Nature of Fire

very day Americans experience the horror of fire. But most people don't understand fire.

Only when we know the true nature of fire can we prepare ourselves and our families.

Each year more than 5,000 Americans die and more than 25,000 are injured in fires, many of which could be prevented.

The United States Fire Administration (USFA), a division of the Federal Emergency Management Agency (FEMA), believes that fire deaths can be reduced by teaching people the basic facts about fire. Below are some simple facts that explain the particular characteristics of fire.

### FIRE IS FAST!

THERE IS LITTLE TIME!

In less than 30 seconds a small flame can get completely out of control and turn into a major fire. It only takes minutes for thick black smoke to fill a house. In minutes, a house can be engulfed in flames. Most fires occur in the home when people are asleep. If you wake up to a fire, you won't have time to grab valuables because fire spreads too quickly and the smoke is too thick. There is only time to escape.



### FIRE IS HOT!

HEAT IS MORE THREATENING THAN FLAMES.

A fire's heat alone can kill. Room temperatures in a fire can be 100 degrees at floor level and rise to 600 degrees at eye level. Inhaling this super hot air will scorch your lungs. This heat can melt clothes to your skin. In five minutes a room can get so hot that everything in it ignites at once: this is called flashover.

### FIRE IS DARK!

FIRE ISN'T BRIGHT, IT'S PITCH BLACK.

Fire starts bright, but quickly produces black smoke and complete darkness. If you wake up to a fire you may be blinded, disoriented and unable to find your way around the home you've lived in for years.

#### FIRE IS DEADLY!

SMOKE AND TOXIC GASES KILL MORE PEOPLE THAN FLAMES DO.

Fire uses up the oxygen you need and produces smoke and poisonous gases that kill. Breathing even small amounts of smoke and toxic gases can make you drowsy, disoriented and short of breath. The odorless, colorless fumes can lull you into a deep sleep before the flames reach your door. You may not wake up in time to escape.

### FIRE SAFETY TIPS

IN THE EVENT OF A FIRE, REMEMBER TIME IS THE BIGGEST ENEMY AND EVERY SECOND COUNTS!

Escape first, then call for help. Develop a home fire escape plan and designate a meeting place outside. Make sure everyone in the family knows two ways to escape from every room. Practice feeling your way out with your eyes closed. Never stand up in a fire, always crawl low under the smoke and try to keep your mouth covered. Never return to a burning building for any reason; it may cost you your life.

Finally, having a working smoke alarm dramatically increases your chances of surviving a fire. And remember to practice a home escape plan frequently with your family.



For More Information Contact:

The United States Fire Administration Office of Fire Management Programs 16825 South Seton Avenue Emmitsburg, MD 21727



## **Curious Kids Set Fires**

A Factsheet for Teaching Children Fire Safety

very day Americans experience the tragedy of fire. Each year more than 5,000 Americans die in fires and more than 25,000 are injured. Figures show that each year about 450 people are killed and \$300 million in property is destroyed in fires attributed to children playing with fire.

The United States Fire Administration (USFA) encourages parents to teach children at an early age about the dangers of fireplay in an effort to prevent child injuries, fire deaths and firesetting behavior in the future. Below are some facts about children and fire safety.

### **CURIOUS KIDS SET FIRES**

Children under five are curious about fire. Often what begins as a natural exploration of the unknown can lead to tragedy.

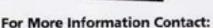
- Children of all ages set over 100,000 fires annually. Approximately 25,000 of those fires are set in homes.
- Children make up between 20% - 25% of all fire deaths.
- Over 30% of the fires that kill children are set by children playing with fire.
- At home, children usually play with fire in bedrooms, in closets and under beds. These are "secret" places where there are a lot of things that catch fire easily.
- Too often, child firesetters are not given proper guidance and supervision by parents and teachers.
   Consequently, they repeat their firesetting behavior.

### PRACTICE FIRE SAFETY IN YOUR HOME

- Supervise young children closely. Do not leave them alone even for short periods of time.
- Keep matches and lighters in a secured drawer or cabinet.
- Have your children tell you when they find matches and lighters.
- Check under beds and in closets for burned matches, evidence your child may be playing with fire.
- Develop a home fire escape plan, practice it with your children and designate a meeting place outside.
- Take the mystery out of fire play by teaching children that fire is a tool, not a toy.
- Teach children the nature of fire. It is FAST, HOT, DARK and DEADLY!
- Teach children not to hide from firefighters, but to get out quickly and call for help from another location.
- Show children how to crawl low on the floor, below the smoke, to get out of the house and stay out in the case of fire.
- Demonstrate how to stop, drop to the ground and roll if their clothes catch fire.

- Install smoke alarms on every level in your home.
- Familiarize children with the sound of your smoke alarm.
- Test the smoke alarm each month and replace the battery at least once a year.
- Replace the smoke alarm every ten years, or as recommended by the manufacturer.

Finally, having a working smoke alarm dramatically increases your chances of surviving a fire. And remember to practice a home escape plan frequently with your family.



The United States Fire Administration Office of Fire Management Programs 16825 South Seton Avenue Emmitsburg, MD 21727



## **Get Out Safely!**

A Factsheet on Fire Escape Planning

ore than 5,000 Americans die each year in fires, and more than 25,000 are injured. Deaths resulting from failed emergency escapes are particularly avoidable.

The United States Fire Administration (USFA), a division of the Federal Emergency Management Agency (FEMA), believes that having a sound escape plan will greatly reduce fire deaths and protect you and your family's safety if a fire occurs.

### HAVE A SOUND FIRE ESCAPE PLAN

In the event of a fire, remember —
time is the biggest enemy and every
second counts! Escape plans help you
get out of your home quickly. In less
than 30 seconds a small flame can get
completely out of control and turn into
a major fire. It only takes minutes for a
house to fill with thick black smoke
and become engulfed in flames.

## SPECIAL CONSIDERATIONS

Practice Escaping From Every Room In The Home

Practice escape plans every month. The best plans have two ways to get out of each room. If the primary way is blocked by fire or smoke, you will need a second way out. A secondary route might be a window onto an adjacent roof or using an Underwriter's Laboratory (UL) approved collapsible ladder for escape from upper story windows. Make sure that windows are not stuck, screen's can be taken out quickly and that security bars can be properly opened. Also, practice feeling your way out of the house in the dark or with your eyes closed.

### Security Bars Require Special Precautions

Security bars may help to keep your family safe from intruders, but they can also trap you in a deadly fire! Windows and doors with security bars must have quick release devices to allow them to be opened immediately in an emergency. Make sure everyone in the family understands and practices how to properly operate and open locked or barried doors and windows.

### Immediately Leave The Home

When a fire occurs, do not waste any time saving property. Take the safest exit route, but if you must escape through smoke, remember to crawl low, under the smoke and keep your mouth covered. The smoke contains toxic gases which can disorient you or, at worst, overcome you.

### Never Open Doors That Are Hot To The Touch

When you come to a closed door, use the back of your hand to feel the top of the door, the doorknob, and the crack between the door and door frame to make sure that fire is not on the other side. If it feels hot, use your secondary escape route. Even if the door feels cool, open it carefully. Brace your shoulder against the door and open it slowly. If heat and smoke come in, slam the door and make sure it is securely closed, then use your alternate escape route.

### Designate A Meeting Place Outside and Take Attendance

Designate a meeting location away from the home, but not necessarily across the street. For example, meet under a specific tree or at the end of the driveway or front sidewalk to make sure everyone has gotten out safely and no one will be hurt looking for someone who is already safe. Designate one person to go to a neighbor's home to phone the fire department.

### Once Out, Stay Out

Remember to escape first, then notify the fire department using the 911 system or proper local emergency number in your area. Never go back into a burning building for any reason. Teach children not to hide from firefighters. If someone is missing, tell the firefighters. They are equipped to perform rescues safely.

Finally, having working smoke alarms installed on every level of your home dramatically increases your chances of survival. Smoke alarm batteries need to be tested every month and changed with new ones at least once a year. Also, consider replacing the entire smoke alarm every ten years, or as the manufacturer guidelines recommend.



### For More Information Contact:

The United States Fire Administration Office of Fire Management Programs 16825 South Seton Avenue Emmitsburg, MD 21727



## **Working Together for Home Fire Safety**

A Factsheet on Home Fire Prevention

ore than 5,000 Americans die each year in fires and more than 25,000 are injured. An overwhelming number of fires occur in the home. There are time-tested ways to prevent and survive a fire. It's not a question of luck. It's a matter of planning ahead.

### EVERY HOME SHOULD HAVE AT LEAST ONE WORKING SMOKE ALARM

Buy a smoke alarm at any hardware or discount store. It's inexpensive protection for you and your family. Install a smoke alarm on every level of your home. A working smoke alarm can double your chances of survival. Test it monthly, keep it free of dust and replace the battery at least once a year. Smoke alarms themselves should be replaced after ten years of service, or as recommended by the manufacturer.

### PREVENT ELECTRICAL FIRES

Never overload circuits or extension cords. Do not place cords and wires under rugs, over nails or in high traffic areas. Immediately shut off and unplug appliances that sputter, spark or emit an unusual smell. Have them professionally repaired or replaced.

## USE APPLIANCES WISELY

When using appliances follow the manufacturer's safety precautions. Overheating, unusual smells, shorts and sparks are all warning signs that appliances need to be shut off, then replaced or repaired. Unplug appliances when not in use. Use safety caps to cover all unused outlets, especially if there are small children in the home.

### ALTERNATE HEATERS

- Portable heaters need their space.
   Keep anything combustible at least three feet away.
- Keep fire in the fireplace. Use fire screens and have your chimney cleaned annually. The creosote buildup can ignite a chimney fire that could easily spread.



 Kerosene heaters should be used only where approved by authorities.
 Never use gasoline or camp-stove fuel. Refuel outside and only after the heater has cooled.

### AFFORDABLE HOME FIRE SAFETY SPRINKLERS

When home fire sprinklers are used with working smoke alarms, your chances of surviving a fire are greatly increased. Sprinklers are affordable — they can increase property value and lower insurance rates.

### PLAN YOUR ESCAPE

Practice an escape plan from every room in the house. Caution everyone to stay low to the floor when escaping from fire and never to open doors that are hot. Select a location where everyone can meet after escaping the house. Get out then call for help.

### CARING FOR CHILDREN

Children under five are naturally curious about fire. Many play with matches and lighters. Tragically, children set over 25,000 house fires every year. Take the mystery out of fire play by teaching your children that fire is a tool, not a toy.

### CARING FOR OLDER PEOPLE

Every year over 1,000 senior citizens die in fires. Many of these fire deaths could have been prevented. Seniors are especially vulnerable because many live alone and can't respond quickly.

### For More Information Contact: The United States Fire Administration

Office of Fire Management Programs 16825 South Seton Avenue Emmitsburg, MD 21727

# FIRE

### Bedroom Fire Safety Helps You Sleep Sound at Night

A Factsheet on Bedroom Fire Prevention

ach year, fire claims the lives of 5,000 Americans and injures more than 25,000.

Bedrooms are a common area of fire origin. Nearly 1,000 lives are lost to fires that start in bedrooms. Many of these fires are caused by misuse or poor maintenance of electrical devices, such as overloading extension cords or using portable space heaters too close to combustibles. Many other bedroom fires are caused by children who play with matches and lighters, careless smoking among adults, and arson.

The United States Fire Administration (USFA) and the Sleep Products Safety Council (SPSC) would like you to know that there are simple steps you can take to prevent the loss of life and property resulting from bedroom fires.

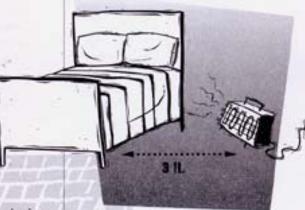
### KIDS AND FIRE: A BAD MATCH

Children are one of the highest risk groups for deaths in residential fires. At home, children usually play with 'n fire - lighters, matches and other ignitables - in bedrooms, in closets, and under beds. These are "secret" places where there are a lot of things that catch fire easily.

- Children of all ages set over 100,000 fires annually. Over 30% of fires that kill children are set by children playing with fire.
- Every year over 800
   children nine years and
   younger die in home fires.
- Keep matches and lighters locked up and away from children. Check under beds and in closets for burnt matches, evidence your child may be playing with matches.
- Teach your child that fire is a tool, not a toy.

### APPLIANCES NEED SPECIAL ATTENTION

Bedrooms are the most common room in the home where electrical fires start. Electrical fires are a special concern during winter months which call for more indoor activities and increases in lighting, heating, and appliance use.



- Do not trap electric cords against walls where heat can build up.
- Take extra care when using portable heaters. Keep hedding, clothes, curtains and other combustible items at least three feet away from space heaters.
- Only use lab-approved electric blankets and warmers. Check to make sure the cords are not frayed.

### TUCK YOURSELF IN FOR A SAFE SLEEP

- Never smoke in bed.
- Replace mattresses made before the 1973 Federal Mattress Flammability Standard. Mattresses made since then are required by law to be safer.

Finally, having working smoke alarms dramatically increases your chances of surviving a fire. Place at least one smoke alarm on each level of your home and in halls outside bedrooms. And remember to practice a home escape plan frequently with your family.

### For More Information Contact: The United States Fire Administration

Office of Fire Management Programs 16825 South Seton Avenue Emmitsburg, MD 21727

Or visit the USFA website: www.usfa.fema.gov

A USFA Public-Private Partnership



## On the Safety Circuit

A Factsheet on Home Electrical Fire Prevention

lectrical fires in our homes claim the lives of 400 Americans each year and injure 1,500 more. Some of these fires are caused by electrical system failures and appliance defects, but many more are caused by the misuse and poor maintenance of electrical appliances, incorrectly installed wiring, and overloaded circuits and extension cords.

The United States Fire Administration (USFA) would like consumers to know that there are simple steps you can take to prevent the loss of life and property resulting from electrical fires.

### THE PROBLEM

During a typical year, home electrical problems account for 45,000 fires, over 400 deaths, and \$610 million in property losses. Home electrical wiring causes twice as many fires as electrical appliances

### THE FACTS

December is the most dangerous month for electrical fires. Fire deaths are highest in winter months which call for more indoor activities and increase in lighting, heating, and appliance use. Most electrical wiring fires start in the bedroom.

### THE CAUSE

### Electrical Wiring

- Most electrical fires result from problems with "fixed wiring" such as faulty electrical outlets and old wiring. Problems with cords and plugs, such as extension and appliance cords, also cause many home electrical fires.
- In urban areas, faulty wiring accounts for 33% of residential electrical fires.
- Many avoidable electrical fires can be traced to misuse of electric cords, such as overloading circuits, poor

maintenance and running the cords under rugs or in high traffic areas.

### Home Appliances

 The home appliances most often involved in electrical fires are electric stoves and ovens, dryers, central heating units, televisions, radios and record players.

### SAFETY PRECAUTIONS

- Routinely check your electrical appliances and wiring
- Frayed wires can cause fires. Replace all worn, old or damaged appliance cords immediately.
- Use electrical extension cords wisely and don't overload them.
- Keep electrical appliances away from wet floors and counters; pay special care to electrical appliances in the bathroom and kitchen.
- When buying electrical appliances look for products which meet the Underwriter's Laboratory (UL) standard for safety.
- Don't allow children to play with or around electrical appliances like space heaters, irons and hair dryers.
- Keep clothes, curtains and other potentially combustible items at least three feet from all heaters.
- If an appliance has a three-prong plug, use it only in a three-slot outlet. Never force it to fit into a twoslot outlet or extension cord.
- Never overload extension cords or

- wall sockets. Immediately shut off, then professionally replace, light switches that are hot to the touch and lights that flicker. Use safety closures to "child-proof" electrical outlets.
- Check your electrical tools regularly for signs of wear. If the cords are frayed or cracked, replace them.
   Replace any tool if it causes even small electrical shocks, overheats, shorts out or gives off smoke or sparks.

Finally, having a working smoke alarm dramatically increases your chances of surviving a fire. And remember to practice a home escape plan frequently with your family.

### For More Information Contact:

### The United States Fire Administration

Office of Fire Management Programs 16825 South Seton Avenue Emmitsburg, MD 21727



## Fireplace and Home Fire Safety

A Factsheet on Rural Fire Safety and Prevention



ore than one-third of Americans use fireplaces, wood stoves and other fuel-fired appliances as primary heat sources in their homes. Unfortunately, many people are unaware of the fire risks when heating with wood and solid fuels.

Heating fires account for 36% of residential home fires in rural areas every year. Often these fires are due to creosote buildup in chimneys and stovepipes. All home heating systems require regular maintenance to function safely and efficiently.

The United States Fire Administration (USFA) encourages you to practice the following fire safety steps to keep those home fires safely burning. Remember, fire safety is your personal responsibility... Fire Stops With You!

## KEEP FIREPLACES & WOOD STOVES CLEAN

- Have your chimney or wood stove inspected and cleaned annually by a certified chimney specialist.
- Clear the area around the hearth of \( \)
  debris, decorations and flammable
  materials.
- Always use a metal mesh screen with fireplaces. Leave glass doors open while burning a fire.
- Install stovepipe thermometers to help monitor flue temperatures.
- Keep air inlets on wood stoves open, and never restrict air supply to fireplaces. Otherwise you may cause creosote buildup that could lead to a chimney fire.
- Use fire-resistant materials on walls around wood stoves.

### SAFELY BURN FUELS

- Never use flammable liquids to start a fire.
- Use only seasoned hardwood. Soft, moist wood accelerates creosote buildup.
  - Build small fires that burn completely and produce less smoke.

- Never burn cardboard boxes, trash or debris in your fireplace or wood stove
- When building a fire, place logs at the rear of the fireplace on an adequate supporting grate.
- Never leave a fire in the fireplace unattended. Extinguish the fire before going to bed or leaving the house.
- Soak hot ashes in water and place them in a metal container outside your home.



### PROTECT THE OUTSIDE OF YOUR HOME

- Stack firewood outdoors at least 30 feet away from your home.
- Keep the roof clear of leaves, pine needles and other debris.

- Cover the chimney with a mesh screen spark arrester.
- Remove branches hanging above the chimney, flues or vents.

### PROTECT THE INSIDE

- Install smoke alarms on every level of your home. Test them monthly and change the batteries at least once a year. Consider installing the new long life smoke alarms.
- Provide proper venting systems for all heating equipment.
- Extend all vent pipes at least three feet above the roof.

### For More Information Contact:

The United States Fire Administration Office of Fire Management Programs 16825 South Seton Avenue Emmitsburg, MD 21727



## Fire-safe Landscaping Can Save Your Home

A Factsheet on Rural Fire Safety and Prevention

ildland fires destroy hundreds of homes and acres of land every year across the country. Fire-safe landscaping is an effective tool that creates an area of defensible space between your home and flammable vegetation that protects against devastating fires.

The United States Fire Administration (USFA) encourages you to keep fire safety at the forefront by learning how to landscape and maintain your property to minimize possible fire damage and slow fires if they start. Remember, fire safety is your personal responsibility... Fire Stops With You!

### DEFENSIBLE SPACE WORKS

During the 1993 raging Malibu fires, a number of homes were saved as a result of the owners' careful pruning and landscaping techniques that protected their homes. In a fire situation, the dead trees and shrubs surrounding your home act as fuel for fire. Removing flammable vegetation reduces the threat of fire. Follow these basic rules to create defensible space that works

- Remove all dead plants, trees and shrubs from the site.
- Reduce excess leaves, plant parts and low-hanging branches.
- Replace dense flammable plants with fire-resistant plants.

The choice of plants, spacing and maintenance are crucial elements in any defensible space landscaping plan.

### TIPS FOR A FIRE-SAFE LANDSCAPE

- Create a defensible space perimeter by thinning trees and brush within 30 feet around your home.
- Beyond 30 feet, remove dead wood, debris and low tree branches.
- Eliminate small trees and plants growing under trees. They allow ground fires to jump into tree crowns.
- Space trees 30 feet apart and prune to a height of 8 to 10 feet.

- Place shrubs at least 20 feet from any structures and prune regularly.
- Plant the most drought-tolerant vegetation within three feet of your home and adjacent to structures to prevent ignition.
- Provide at least a 10 to 15 foot separation between islands of shrubs and plant groups to effectively break-up continuity of vegetation.
- Landscape your property with fireresistant plants and vegetation to prevent fire from spreading quickly.

### CHOOSE FIRE RESISTANT MATERIALS

- Check your local nursery or county extension service for advice on fire resistant plants that are suited for your environment.
- Create fire-safe zones with stone walls, patios, swimming pools, decks and roadways.
- Use rock, mulch, flower beds and gardens as ground cover for bare spaces and as effective firebreaks.
- There are no "fire-proof" plants.
   Select high moisture plants that grow close to the ground and have a low sap or resin content.
- Choose plant species that resist ignition such as rockrose, iceplant and aloe.
- Fire-resistant shrubs include hedging roses, bush honeysuckles, currant, cotoneaster, sumac and shrub apples.

 Plant hardwood, maple, poplar and cherry trees that are less flammable than pine, fir and other conifers.

### MAINTAIN YOUR HOME AND SURROUNDING PROPERTY

- Maintain a well-pruned and watered landscape to serve as a green belt and protection against fire.
- Keep plants green during the dry season and use supplemental irrigation, if necessary.
- Trim grass on a regular basis up to 100 feet surrounding your home.
- Stack firewood at least 30 feet from your home.
- Store flammable materials, liquids and solvents in metal containers outside the home at least 30 feet away from structures and wooden fences.
- No matter where you live, always install smoke alarms on every level of your home. Test them monthly and change the batteries at least once a year. Consider installing the new long-life smoke alarms.

### For More Information Contact: The United States Fire Administration Office of Fire Management Programs 16825 South Seton Avenue Emmitsburg, MD 21727



## A Season for Sharing in Fire Safety

A Factsheet on Holiday Fire Prevention

ach year fires associated with the holiday season injure 1,200 individuals and cause over \$25 million in damage.

According to the United Sates Fire Administration (USFA), there are simple life-saving steps you can take to ensure a safe and happy holiday. By following some of the outlined precautionary tips, individuals can greatly reduce their chances of becoming a holiday fire casualty.

### PREVENTING HOLIDAY TREE FIRES

Special fire safety precautions need to be taken when keeping a live tree in the house. A burning tree can rapidly fill a room with fire and deadly gases.

Selecting a Tree for the Holiday

Needles on fresh trees should be green and hard to pull back from the branches, and the needle should not break if the tree has been freshly cut. The trunk should be sticky to the touch. Old trees can be identified by bouncing the tree trunk on the ground. If many needles fall off, the tree has been cut too long, has probably dried out, and is a fire hazard.

#### Caring for Your Tree

Do not place your tree close to a heat source, including a fireplace or heat vent. The heat will dry out the tree, causing it to be more easily ignited by heat, flame or sparks. Be careful not to drop or flick cigarette ashes near a free. Do not put your live tree up too early or leave it up for longer than two weeks. Keep the tree stand filled with water at all times.

#### Disposing of Your Tree

Never put tree branches or needles in a fireplace or woodburning stove. When the tree becomes dry, discard it promptly. The best way to dispose of your tree is by taking it to a recycling center or having it hauled away by a community pick-up service.

### HOLIDAY LIGHTS

Maintain Your Holiday Eights

Inspect holiday lights each year for frayed wires, bare spots, gaps in the insulation, broken or cracked sockets, and excessive kinking or weat before putting them up. Use only lighting listed by an approved testing laboratory.

Do Not Overload Electrical Outlets

Do not link more than three light, strands, unless the directions indicate it is safe. Connect strings of lights to an extension cord before plugging the cord into the outlet. Make sure to periodically check the wires — they should not be warm to the touch.

Do Not Leave Holiday Lights on Unartended

#### HOLIDAY DECORATIONS

Use Only Nonflammable Decorations

All decorations should be nonflammable or flame retardant and placed away from heat vents.

Never Put Wrapping Paper in a Fireplace

If can throw off dangerous sparks and produce a chemical buildup in the home that could cause an explosion.

Artificial Holiday Trees

If you are using a metallic or artificial tree, make sure it is flame retardant.

### CANDLE CARE

Avoid Using Lit Candles

If you do use them, make sure they are in stable holders and place them where they cannot be easily knocked down. Never leave the house with candles burning.

Never Put Lit Candles on a Tree Do not go near a holiday tree with an

Do not go near a holiday tree with an open flame — candles, lighters or matches.

Finally, as in every season, have working smoke alarms installed on every level of your home, test them monthly and keep them clean and equipped with fresh batteries at all times. Know when and how to call for help. And remember to practice your home escape plan.

### For More Information Contact:

The United States Fire Administration Office of Fire Management Programs 16825 South Seton Avenue Emmitsburg, MD 21727