FIRE PREVENTION WEEK 2012

Prevent Home Electrical Fires
October 7-13, 2012

ESFi
Electrical Safety Foundation International
About Fire Prevention Week

Fire Prevention Week was established to commemorate the Great Chicago Fire, the tragic blaze that killed more than 250 people, left 100,000 homeless, destroyed more than 17,400 structures, and burned more than 2,000 acres on October 8th and 9th, 1871. Forty years after the Great Chicago Fire, the Fire Marshals Association of North America (today known as the International Fire Marshals Association) decided that the anniversary should be used as an occasion to keep the public informed about the importance of fire prevention.

In 1920, President Woodrow Wilson issued the first National Fire Prevention Day proclamation, and since 1922, Fire Prevention Week has been observed on the Sunday through Saturday period in which October 9th falls. Fire Prevention Week is the longest running public health and safety observance on record with the President of the United States having signed a proclamation declaring a national observance during that week every year since 1925.

The National Fire Protection Association (NFPA)’s theme for Fire Prevention Week 2012, “Have Two Ways Out!,” highlights the importance of fire escape planning and practice. From October 7-13, 2012, the NFPA leads the campaign for home fires safety, encouraging families across the country to have a fire escape plan that includes at least two ways out.

For more information on Fire Prevention Week, visit the NFPA website at www.firepreventionweek.org.

Why Focus on Electrical Safety during Fire Prevention Week?

Electrical failures are a leading cause of home fires every year. According to NFPA, electrical failures or malfunctions were factors in an estimated 46,500 home fires in 2010. These fires caused 420 deaths, 1,520 injuries, and $1.5 billion in property damage. Home electrical fires like these can be prevented.

Each year, the Electrical Safety Foundation International (ESFI) joins with NFPA to promote fire safety during Fire Prevention Week. While NFPA’s 2012 campaign focuses on planning for a quick escape during a fire, ESFI’s 2012 Fire Prevention Week resources feature steps that can be taken to prevent electrical fires before they start. Establishing good electrical safety habits while learning to identify and correct electrical fire hazards will greatly reduce the risks for home electrical fires.

Who is ESFI?

The Electrical Safety Foundation International (ESFI) is a non-profit organization dedicated exclusively to promoting electrical safety in the home, school, and workplace. We engage in public education campaigns throughout the year to increase electrical safety awareness and advocate for safe electrical practices. Education and awareness are the keys to reducing electrically-related fires, fatalities, injuries, and property loss.
How to Use this Toolkit

ESFI encourages you to use these resources as part of your Fire Prevention Week activities. You can become better prepared for a fire emergency and take steps to prevent electrical fires at the same time. As you are working on your family fire escape plan and finding “two ways out,” use the Electrical Fire Safety Checklist to help you identify and correct electrical fire hazards in your home. Keep the tip sheets on hand to remind you how to properly maintain your smoke alarms and arc fault circuit interrupters. Learn more about home electrical safety and electrical fire prevention with the many videos and interactive activities available on ESFI’s website at www.electrical-safety.org.

Interested in making electrical safety part of the Fire Prevention Week campaign for your school, community or workplace? ESFI provides all of our safety resources, including this Fire Prevention Week Toolkit, at no cost. We invite you to copy and distribute our resources, but respectfully request that the material not be revised or altered.

Toolkit Contents

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For additional fire and electrical safety resources, visit ESFI at www.electrical-safety.org and the National Fire Protection Association at www.firepreventionweek.org.
AFCI Facts

- Many home electrical fires are started by arcing faults.
- Arcing faults happen when electrical wiring becomes damaged, stressed, overheated or worn.
- Wiring inside the wall can be damaged by nails, screws, or drill bits that are being used on the wall, like when hanging a picture.
- Wiring inside extension and electrical cords can be damaged when pinched by heavy furniture and doors, or when staples used to hold them cut or pinch the cord’s insulation.
- Placing extension cords inside walls or under carpets can cause them to overheat, which could also cause an arc fault.
- AFCIs are advanced circuit breakers that replace the standard breakers in your home’s electrical service panel.
- AFCIs detect hazardous arcing conditions and shut down the electricity before a fire can start.
- The current edition of the National Electrical Code (NEC) requires that AFCIs be installed in the bedrooms and living areas of all newly constructed homes.
- Standard circuit breakers in existing homes can easily be upgraded to AFCIs.
- AFCIs should be installed by a licensed, qualified electrician.
- Once installed, AFCIs need to be tested every month to ensure they are working properly.

AFCI Q&A

How do I know if I have AFCIs installed in my home?
Open your home electrical service panel and look at your circuit breakers. Do your breakers have a TEST button on them? Both AFCI and ground fault circuit interrupter (GFCI) breakers have TEST buttons, but standard breakers do not. If you see the TEST button, read the sticker attached to the breaker to find out if it is an AFCI or GFCI breaker.

I have seen AFCI testing devices sold in stores. Are they more reliable than the “test” button on the AFCI?
The TEST button on the AFCI is the best way to make sure your AFCIs are working properly. Instruments sold as AFCI “indicators” or “testers” may not work with all types or brands of AFCIs.

What's the difference between an AFCI and a GFCI?
GFCIs are designed to protect people from electric shock. AFCIs protect against electrical fires caused by dangerous arcing faults.

Why do different states have different requirements for AFCIs?
Although AFCI requirements have been included in the National Electrical Code (NEC) since the 2005 edition, each state has the discretion to adopt the NEC as a whole or in part, and the adoption process differs in each state. Check with your state to find out what edition of the NEC is currently being used and whether the most current AFCI requirements were included in the adoption.

More AFCI resources, including the AFCI Virtual Demonstration, can be found on ESFI’s website at www.electrical-safety.org.
Arc fault circuit interrupters (AFCIs) provide advanced protection against electrical fires, but only if they are working properly. Follow these easy steps to test your AFCIs every month:

1. Test AFCIs when your power is on.

2. Open the electrical service panel.

3. With the breaker switch in the ON position, press the AFCI TEST button.

4. The AFCI should trip, causing the switch to move to either the OFF position or the TRIP position if the breaker includes one.

5. If it trips, the AFCI is working. Turn it OFF and then ON again to reset.

6. If the AFCI does not trip, contact a licensed electrician to replace it.
Smoke alarms should be installed in every bedroom, outside each sleeping area, and on every level of the home.

Choose alarms that bear the label of a nationally-recognized testing laboratory.

If possible, alarms should be mounted in the center of the ceiling.

Test smoke alarms on a monthly basis by pressing the TEST button.

Batteries for battery-operated or battery back-up alarms should be replaced at least once a year. If an alarm “chirps” or “beeps,” it should be replaced immediately.

Occasionally dust or lightly vacuum the exterior of the alarm to remove dust and cobwebs.

All smoke alarms should be replaced at least every ten years, or sooner if indicated in the manufacturer's instructions.
**Electrical Fire Safety Checklist**

**Electrical fires do not have to happen.** Use this checklist to help you find and fix electrical fire hazards in your home before they can start a fire.

### Smoke Alarms

<table>
<thead>
<tr>
<th>Question</th>
<th>Action</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have smoke alarms in all the right locations?</td>
<td>NO or I DON’T KNOW: Install smoke alarms on each level of the home, outside each sleeping area, and inside each bedroom.</td>
<td>Smoke alarms save lives. Nearly two-thirds of home fire deaths occur in homes without working smoke alarms.</td>
</tr>
<tr>
<td>Do you test them once a month?</td>
<td>NO: Test smoke alarms once a month by pressing the TEST button.</td>
<td>Smoke alarms can stop working without showing signs of failure, so regular testing is necessary to ensure they are working properly.</td>
</tr>
<tr>
<td>Have you changed the batteries this year?</td>
<td>NO: Replace batteries at least once a year or sooner if they begin to “chirp.”</td>
<td>When batteries run down, the smoke alarm will not sound.</td>
</tr>
<tr>
<td>Do you know how old the alarms are?</td>
<td>NO: Smoke alarms should be replaced at least every 10 years. Replace alarms if you are unsure of their age.</td>
<td>The components inside smoke alarms can wear out over time, which could affect their operation.</td>
</tr>
</tbody>
</table>

### Switches and Outlets

<table>
<thead>
<tr>
<th>Question</th>
<th>Action</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are all the switches and outlets working properly?</td>
<td>NO: Have a licensed electrician check these switches and outlets.</td>
<td>Improperly operating switches or outlets may indicate an unsafe wiring condition, which could be a fire hazard.</td>
</tr>
<tr>
<td>Are any switches or outlets warm to the touch?</td>
<td>YES: Stop using these switches and outlets until they are checked by a licensed electrician.</td>
<td>Unusually warm switches or outlets may indicate an unsafe wiring condition.</td>
</tr>
<tr>
<td>Do any switches or outlets make crackling, buzzing, or sizzling sounds?</td>
<td>YES: Have a licensed electrician check these switches and outlets.</td>
<td>Unusual noises from a switch or outlet may indicate an unsafe wiring condition, such as a loose electrical connection.</td>
</tr>
<tr>
<td>Do plugs fit snugly into all outlets?</td>
<td>NO: Outlets without a snug fit should be replaced by a licensed electrician.</td>
<td>Loose-fitting plugs can cause overheating and fires.</td>
</tr>
</tbody>
</table>

Visit ESFI’s website at [www.electrical-safety.org](http://www.electrical-safety.org) for more electrical and home fire safety information.
Electrical Fire Safety Checklist

Cords

☐ Is any cord cracked, frayed, or otherwise damaged?
YES: Do not use damaged cords. Replace the cord or the equipment. Damaged cords may have exposed wires that can be a fire and shock hazard.

☐ Are any cords pinched by furniture or in doors/windows?
YES: Move furniture or relocate cords to prevent cord damage. Pinching cords can cause damage to the insulation or break wire strands, creating a fire or shock hazard.

☐ Are cords attached to anything with nails or staples?
YES: Remove nails or staples. Check cord and replace if damaged. Nails and staples can cut or pinch insulation or break wire strands, presenting a fire or shock hazard.

☐ Are cords located under carpets or rugs?
YES: Move cords or carpets so the cords are not covered. Cords can overheat if air cannot flow around them, creating a fire hazard.

☐ Do you use extension cords on a permanent basis?
YES: Have a licensed electrician install new outlets where needed or move equipment closer to an outlet. Extension cords are designed to be used only temporarily. Extended use may damage the cord, creating a fire and shock hazard.

☐ Are cords kept wrapped up while being used?
YES: Unwrap cords. Wrapped cords trap heat, which can lead to melting or weakening of the insulation.

Lamps and Appliances

☐ Are you using the appropriate wattage light bulb in all lamps and light fixtures?
NO or I DON’T KNOW: Replace incorrect bulbs with bulbs of the proper wattage. Use bulbs of 60 watts or less if you are unsure of the appropriate wattage. A bulb with a wattage higher than recommended may overheat the light fixture, wiring or nearby combustible material, leading to a fire.

☐ Are portable electric heaters kept at least 3 feet away from anything that can burn?
NO: Move heater at least 3 feet away from combustible material, such as curtains, bedding, and newspapers. Some heaters can produce enough heat to ignite nearby combustible materials.

☐ Are all appliance cords placed so they will not come in contact with hot surfaces?
NO: Move cords away from all heat sources, such as heaters, range, and toaster. Cords can melt or burn from excess heat. This can expose wires and lead to a fire or electric shock.

Visit ESFI’s website at www.electrical-safety.org for more electrical and home fire safety information.
## Electrical Panel

<table>
<thead>
<tr>
<th>Question</th>
<th>Action</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are fuses or circuit breakers the correct size for the circuit?</td>
<td><strong>NO or I DON’T KNOW:</strong> Have a licensed electrician determine the correct sizes and install them.</td>
<td>The wrong size fuse or circuit breaker can cause the wiring to overheat, creating a fire hazard.</td>
</tr>
<tr>
<td>Do you have arc fault circuit interrupters (AFCIs)?</td>
<td><strong>NO.</strong> Consider having a licensed electrician replace the standard circuit breakers with AFCIs.</td>
<td>AFCIs are advanced circuit breakers that provide greater electrical fire protection.</td>
</tr>
<tr>
<td>If AFCIs are installed, do you test them every month?</td>
<td><strong>NO.</strong> Test AFCIs monthly using the TEST button on the AFCI. Have a licensed electrician replace defective AFCIs.</td>
<td>AFCIs can stop working without showing signs of failure, so regular testing is necessary to ensure they are working properly.</td>
</tr>
</tbody>
</table>

Visit ESFI’s website at [www.electrical-safety.org](http://www.electrical-safety.org) for more electrical and home fire safety information.
Fires happen every day, and the toll they take on our lives is boundless. Electrical failure or malfunction is a leading cause of home fires year after year. It is incredibly important to arm yourself and your loved ones with tools to fight them, of which knowledge is among the most critical. Below you will find a collection of new and updated safety materials from ESFI to help you both prepare to be fire safe and establish good electrical safety habits.

**Fact Sheets, Checklists and Tip Sheets**

### Fire Safety

- **Fire Safety Planning Checklist** – Plan ahead and be prepared before a fire emergency happens. Use this simple guidance to help create your family’s fire safety plan. [http://www.esfi.org/index.cfm/cd/FAP/cdid/11322/pid/10272](http://www.esfi.org/index.cfm/cd/FAP/cdid/11322/pid/10272)

- **Fire Safety Planning for Parents** – Keep the needs of children in mind when you create and practice your family fire safety plan. [http://esfi.org/index.cfm/cd/FAP/cdid/11328/pid/10272](http://esfi.org/index.cfm/cd/FAP/cdid/11328/pid/10272)

- **Fire Safety For Older Adults** – Adults over age 65 are more than twice as likely to die in a home fire as the average person. Additional planning is needed to make sure that older adults are adequately prepared to escape in the event of a fire emergency. [http://esfi.org/index.cfm/cd/FAP/cdid/11356/pid/10272](http://esfi.org/index.cfm/cd/FAP/cdid/11356/pid/10272)

- **Fire Safety Planning For People With Special Needs** – People with special needs may require assistance and/or special alerting devices to help them make a safe fire escape. [http://esfi.org/index.cfm/cd/FAP/cdid/11330/pid/10272](http://esfi.org/index.cfm/cd/FAP/cdid/11330/pid/10272)

- **Fire Safety Planning For Guests And Babysitters** – Follow these simple tips for preparing house guests and babysitters for a fire emergency before it happens. [http://esfi.org/index.cfm/cd/FAP/cdid/11324/pid/10272](http://esfi.org/index.cfm/cd/FAP/cdid/11324/pid/10272)

- **Fire Safety For Pet Owners** – Nearly 1,000 home fires every year are accidently started by pets. Taking steps to keep your pet safe from fires is part of being a responsible pet owner. [http://esfi.org/index.cfm/cd/FAP/cdid/11358/pid/10272](http://esfi.org/index.cfm/cd/FAP/cdid/11358/pid/10272)

- **Fire Extinguisher Safety Tips** – Fire extinguishers can save lives and property, but they should only be used by adults who have been trained on how and when to properly use them. [http://esfi.org/index.cfm/cd/FAP/cdid/11320/pid/10272](http://esfi.org/index.cfm/cd/FAP/cdid/11320/pid/10272)

- **Escape Ladder Safety Tips** – Escape ladders can provide a means of escape from a second or third story room, but should not be considered the primary escape route. [http://esfi.org/index.cfm/cd/FAP/cdid/11318/pid/10272](http://esfi.org/index.cfm/cd/FAP/cdid/11318/pid/10272)


- **Carbon Monoxide Fact Sheet** – This odorless, colorless, tasteless gas is often called the “silent killer” because it is virtually undetectable without the use of detection technology like a CO alarm. [http://esfi.org/index.cfm/cd/FAP/cdid/11354/pid/10272](http://esfi.org/index.cfm/cd/FAP/cdid/11354/pid/10272)

- **Carbon Monoxide Alarm Safety Tips** – Proper installation and maintenance of carbon monoxide (CO) alarms is critical to your safety. [http://esfi.org/index.cfm/cd/FAP/cdid/11316/pid/10272](http://esfi.org/index.cfm/cd/FAP/cdid/11316/pid/10272)

- **Kitchen Safety Tips** – The kitchen may be the “heart” of the home, but it’s also where many home fires start. Identify and correct potential hazards in your kitchen. [http://esfi.org/index.cfm/cd/FAP/cdid/11565/pid/10272](http://esfi.org/index.cfm/cd/FAP/cdid/11565/pid/10272)

- **Winter Season Safety Tips** – The arrival of colder winter weather increases the likelihood of heating-related fires, fatalities and injuries. These simple reminders will help you and your loved ones stay safe all winter long. [http://esfi.org/index.cfm/cd/FAP/cdid/12274/pid/10272](http://esfi.org/index.cfm/cd/FAP/cdid/12274/pid/10272)
Fire Prevention Week
Resource List

Electrical Safety

Home Electrical Safety Challenge – Use these worksheets to give your home an electrical safety “check-up.”
http://esfi.org/index.cfm/cd/FAP/cdid/11557/pid/10272

Appliance Safety Tips – Identify and prevent electrical and fire safety hazards with these quick tips.
http://esfi.org/index.cfm/page/Appliance-Safety-Tips/cdid/11228/pid/10272

Battery Safety Tips – When used correctly, batteries provide a safe and dependable source of power.
http://esfi.org/index.cfm/page/Battery-Safety-Tips/cdid/10923/pid/10272

Buyer Beware: Counterfeit Electrical Products – Unlike fake handbags, watches, or designer apparel, counterfeit electrical products pose significant safety hazards. Follow these guidelines to help you identify counterfeit products.
http://esfi.org/index.cfm/page/Counterfeit-Electrical-Products/cdid/12182/pid/10272

Extension Cords Safety Tips – Using extension cords properly is critical to your safety.

Home Wiring Tips – Learn to identify the warning signs of home wiring hazards.

Public Service Announcements (PSAs)

Arc Fault Circuit Interrupter (AFCI) Awareness PSA (2:09) – An arc fault is a dangerous electrical problem caused by damaged, overheated, or stressed electrical wiring or devices. The solution to this problem is an arc fault circuit interrupter, or AFCI.
http://www.esfi.org/index.cfm/page/AFCI-Awareness-PSA/cdid/10470/pid/11405

AFCIs: Hints For Homeowners PSA (1:00) – Arc Fault Circuit Interrupters (AFCIs) provide advanced protection against home electrical fires.

Fire Prevention PSA (1:00) – There is newer technology available to protect your family and home from electrical fires. Learn more about how Arc Fault Circuit Interrupters (AFCIs) are preventing tragic home fires before they happen.
http://www.esfi.org/index.cfm/page/Fire-Prevention-PSA/cdid/10476/pid/11405

*Portable Generator Safety PSA (1:00) – Understanding the dangers associated with portable generators before you use one could save your life.
http://esfi.org/index.cfm/page/Portable-Generator-Safety-Public-Service-Announcement/cdid/11819/pid/11405

Brochures and Workbooks

Electrical Safety Workbook – This guide helps homeowners understand and properly maintain their home electrical system.
http://www.esfi.org/index.cfm/cd/FAP/cdid/10792/pid/10272

Know The Dangers In Your Older Home – Booklet provides facts, statistics, and tools to educate people everywhere about the electrical dangers commonly found in older homes.
http://www.esfi.org/index.cfm/cd/FAP/cdid/10802/pid/10272

Arc Faults and Electrical Safety – Brochure introduces arc fault circuit interrupters (AFCIs) and explains how they work, when they should be used, and how to install and test them safely.
http://esfi.org/index.cfm/cd/FAP/cdid/12478/pid/10272

Use Extension Cords Safely – If used improperly, extension cords can cause fire and injury - even death. This brochure provides tips for using extension cords safely.
http://esfi.org/index.cfm/cd/FAP/cdid/12482/pid/10272
Safety Videos and Demonstrations

AFCI Virtual Demonstration (1:44) – Arc fault circuit interrupters, or AFCIs, can prevent many of the nearly 30,000 arcing fires that occur in the United States each year. Find out how these advanced circuit breakers provide enhanced electrical fire protection.  
[http://esfi.org/index.cfm/page/AFCI-Virtual-Demonstration/cdid/10456/pid/11405]

*ESFI Extension Safety Cord Virtual Demonstration (2:15) – Prevent potentially dangerous extension cord mistakes by following a few simple guidelines.  

*ESFI Smoke Alarm Virtual Demonstration (1:59) – On average, 8 people die in a home fire each day in the United States, for a total of nearly 3,000 fatalities every year. Follow these simple steps to make sure your home and family are adequately protected by working, properly installed smoke alarms.  

GFCI Virtual Demonstration (1:36) – Ground fault circuit interrupters, or GFCIs, have saved thousands of lives over the last three decades. Found mostly in areas where electrical products might come in contact with water, a GFCI is a special type of electrical outlet designed to cut off power before an electrical shock can occur.  
[http://esfi.org/index.cfm/page/GFCI-Virtual-Demonstration/cdid/10458/pid/11405]

What is a GFCI Outlet? (3:29) – A Ground Fault Circuit Interrupter (GFCI) is a type of electrical outlet that provides an additional layer of protection against shock and electrocution. Learn more about GFCIs and how they can help protect you from electrical hazards in your home.  
[http://esfi.org/index.cfm/page/What-is-a-GFCI-Outlet/cdid/10527/pid/11405]

*Home Electrical Safety Video (3:00) – Understanding the basics of your home’s electrical system can help you identify and avoid potential hazards.  

*Space Heater Safety Virtual Demonstration (2:08) – Portable electric space heaters can be a convenient source of supplemental heat for your home in cold weather, but they can also increase the risks of fire or electric shock if not used properly. Keep your home safe and warm this winter with some helpful tips from ESFI.  

Tamper Resistant Recepticle (TRR) Virtual Demonstration (0:54) – Each year, nearly 2,400 children are treated in hospitals for shocks and burns from electrical outlets. Fortunately, childproofing your home is now easier thanks to tamper resistant receptacles, or TRRs.  

Interactive Resources

*Virtual Fire Drill – This video game-style simulation allows you to put your fire safety knowledge to the test by “escaping” from a virtual fire. After successfully navigating the simulation, information is provided to guide you through the process of developing an effective family fire safety plan.  
[http://virtualfiredrill.esfi.org/]

Virtual Home – Visit ESFI’s Virtual Home to learn more about your home’s electrical system and the devices you use in it every day.  
[http://virtualhome.esfi.org/]

*Kids’ Corner – The Kids’ Corner’s entertaining cartoon videos and interactive games deliver critical electrical and fire safety messages to children in a fun, engaging environment.  
[http://kids.esfi.org/]

FPW12
Resources for Children

**Investigate With P.I. Plug: It's Electric!** - This dynamic safety awareness program was developed to teach children in grades 3-5 about electrical and fire safety. The classroom toolkit, developed in accordance with National Science Education standards, includes a teaching poster, student worksheets, and a family take-home sheet.  

**P.I. Plug's Home Safety Video** (3:31) – Join ESFI's cartoon mascot, Private I. Plug, as he learns about electrical and fire dangers in this fun, animated video.  

**P.I. Plug's Smoke Alarm Safety Video** (5:32) – Watch Private I. Plug as he celebrates his smoke alarm's birthday and learns about fire escape plans.  

Resources noted with an asterisk mark (*) are also available in Spanish. To locate them, visit [www.electrical-safety.org](http://www.electrical-safety.org).

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