



National Electrical Safety Month Campaign Toolkit

**Electrical Safety Foundation International
May 2010**



INTRODUCTION

Electricity is an integral part of life in the United States. We use it so often for so many different purposes that it is easy to take it for granted. Yet, situations arise daily where use of electricity has deadly consequences. Each year, hundreds of lives are lost and thousands more people are injured in needless electrically-related accidents. These tragedies occur in homes, schools, the workplace, and recreational settings.

Education and awareness of electrical safety can help save lives and prevent injuries and property damage in the home and the workplace.

May is National Electrical Safety Month. To help promote safety, the Electrical Safety Foundation International (ESFI) is launching a public awareness campaign to promote the importance of electrical safety and educate key audiences about the steps that can be taken to prevent electrical fires, injuries, and fatalities in our homes, schools, and places of work.

You can demonstrate your commitment to electrical safety by involving members, clients, customers, and community volunteers in this public awareness effort.

In this kit, you will find everything you and your organization will need to create and conduct an effective electrical safety awareness campaign for your community, organization, school, or home. Please make use of these tools, inserting the name of your company or organization's name and spokesperson into the title and/or quotes.

ESFI's complimentary 2010 NESM Campaign Toolkit can be downloaded on the foundation's official website at www.electrical-safety.org.



How to Use this Toolkit

In this kit, you will find tools you can use to facilitate an effective electrical safety awareness campaign for your community, organization, customers, and workplace associates.

This kit is organized to align with the campaign itself, focusing on four key issues as part of the broader awareness effort during National Electrical Safety Month.

The materials in each section provide a description of the electrical hazard, highlight facts and statistics, and outline basic safety tips to help protect you. Copy-ready press releases and templates are also included to assist you in your local efforts to increase electrical safety awareness.

Materials from each section can be used in conjunction with the additional print, online, video and multimedia resources found throughout the ESFI 2010 NESM Campaign Toolkit at www.electrical-safety.org.



Week 1: Renovating the Right Way

DO-IT-YOURSELF ELECTRICAL SAFETY

Each year, thousands of people in the United States are critically injured and electrocuted as a result of electrical fires, accidents, electrocution in their own homes.

The current economic downturn has inspired more homeowners to tackle do-it-yourself projects than ever before. Faced with declining home values and aging properties, homeowners may choose not to pay for the services of a licensed electrician.

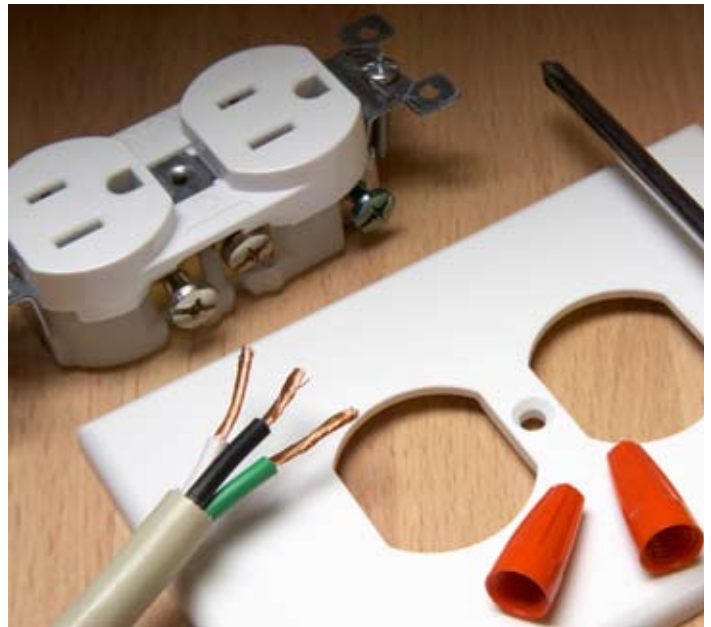
However, most do not have the training or experience needed to safely perform home electrical work, increasing the risk of immediate injuries and electrocutions and potentially introducing new dangers into the home.

Working with electricity requires thorough planning and extreme care, and cutting corners can be a costly mistake.

Safety Tips

ESFI strongly recommends hiring a qualified, licensed electrician to perform any electrical work in your home. However, if you do decide to do-it-yourself, consider the following important safety tips before undertaking any home electrical project:

- Make an effort to learn about your home electrical system so that you can safely navigate and maintain it.
- Never attempt a project that is beyond your skill level. Knowing when to call a professional may help prevent electrical fires, injuries, and fatalities.
- Always turn off the power to the circuit that you plan to work on by switching off the circuit breaker in the main service panel.
- Be sure to unplug any lamp or appliance before working on it.
- Test the wires before you touch them to make sure that the power has been turned off.
- Never touch plumbing or gas pipes when performing a do-it-yourself electrical project.



Facts and Statistics

- The U.S. home improvement market nearly doubled in size between 1995 and 2005 to \$280 billion a year, according to the Joint Center for Housing Studies at Harvard University.
- Over the same period of time, emergency rooms reported ever increasing numbers of visits due to injuries from home workshop equipment. Many of these homeowners were critically injured while attempting to perform home electrical work themselves.
- The most recent data from the U.S. Consumer Product Safety Commission shows that there are nearly 400 electrocutions in the United States each year.
- Approximately 15 percent of electrocutions are related to consumer products. Wiring hazards, including damaged or exposed wiring and household wiring, accounted for nearly 14 percent of these deaths.
- Electrical outlets cause nearly 4,000 injuries every year.
- Electrical failure accounted for 89 percent of electrical fires in residential buildings between 2003-2005 (U.S. Fire Administration)
- Each year, more than 19,700 people are injured by ceiling fans that are improperly mounted or incorrectly sized.

POWER TOOL SAFETY

As the weather gets warmer, homeowners tend to look beyond the interior and begin outdoor maintenance and improvement projects. Many of these do-it-yourself projects involve the use of power tools. Working with power tools requires skilled instruction and training as they can be deadly if not properly used or maintained.

Safety Tips

When working with power tools in your home or yard, safety should always be the foremost concern. The following guidelines can be used to ensure your safety when using power tools:

- Use ground fault circuit interrupters (GFCIs) with every power tool to protect against electric shock hazards.
- When working with electricity, use tools with insulated grips to avoid electrical shock.
- Always plug power tools into a grounded outlet, unless they are double-insulated.
- Never use power tools near live electrical wires or water pipes.
- If a power tool trips a safety device while in use, take the tool to a manufacturer-authorized repair center for service.
- Do not use power tools without the proper guards.
- Do not use power tools with an extension cord that exceeds 100 feet.
- Appropriate personal protective gear should be worn when using power tools.
- Use extreme caution when cutting or drilling into walls where electrical wires or water pipes could be accidentally touched or penetrated.



Facts and Statistics

- The most recent data from the U.S. Consumer Product Safety Commission shows that there are nearly 400 electrocutions in the United States each year. Approximately 15 percent of electrocutions are related to consumer products.
- Eight percent of consumer product-related electrocutions each year are attributed to electrical accidents with power drills, saws, sanders, hedge trimmers, and other electric power tools (CPSC). Most of these fatalities could be prevented by the use of a GFCI.
- Nine percent of electrocutions were caused by accidents involving the use of lawn and garden equipment and ladders, which in most cases came into contact with overhead power lines.



Week 2: Staying Safe at Work

SURGE PROTECTOR & POWER STRIP SAFETY

Surge Protectors

Surges are sudden and unwanted increases in voltage that can damage, degrade or destroy the sensitive electronic equipment in your home or business, resulting in equipment damage or downtime, financial losses, and loss of data.

A surge protector is designed to protect your computer and other equipment from surges in power. The standard voltage in most outlets in U.S. offices is 120 volts. If the voltage rises above 120 volts, a surge protector helps prevent the increase from ruining your computer and its components.

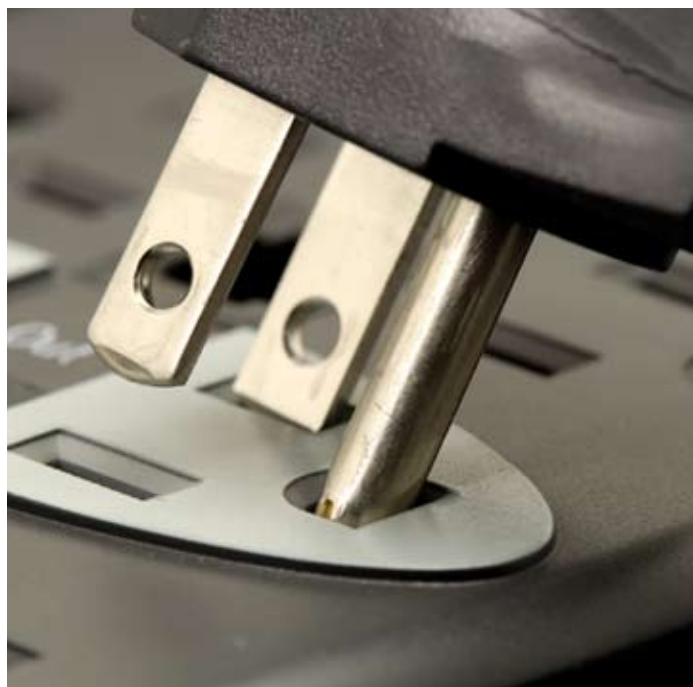
To determine whether surges may be affecting your electrical equipment, look for:

- Computer lock-ups;
- An unexplainable corruption of data;
- Equipment shutdown;
- Loss of power; and/or
- Flickering lights.

Power Strips

A power strip is a strip of sockets that attaches to the end of a flexible cable and allows multiple devices to be plugged in to the same outlet. However, they can very easily create a fire hazard if not used appropriately.

Power strips do not provide more power to a location, just more access to the same limited capacity of the circuit into which it is connected. The circuit likely also still serves a variety of other outlets and fixtures in addition to the multiple electrical items you might be supplying with the power strip.



Facts and Statistics

Keep these safety principles in mind when using power strips and surge protectors:

- Remember that power strips and surge protectors are not the same thing. While some power strips are surge suppressors, be certain you are buying the equipment that matches your needs.
- Be sure you are not overloading the circuit. Know the capacity of the circuit and the power requirements of all the electrical items plugged into the power strip, and all the other outlets on the circuit.
- Surge protectors protect equipment, but they do not protect from the potential hazards of an overloaded circuit. Make sure the electrical load is not too great for the circuit.
- A heavy reliance on power strips is an indication that you have too few outlets to address your needs. Have additional outlets installed by a licensed electrician where you need them.
- Consider purchasing surge suppressors with cable and phone jacks to provide the same protection to your phone, fax, computer modem and television.

EXTENSION CORD SAFETY

An extension cord is an insulated, flexible electric wire fitted with a plug at one end and one or more outlets on the other. It provides a convenient way to use electrical equipment that can't reach a wall outlet.

Safety Tips

These important safety principles can help keep your office safe from electrical hazards:

- Extension cords should only be used on a temporary basis; unplug and safely store them after every use.
- Never use a cord that feels hot or is damaged in any way. Touching even a single exposed strand can give you an electric shock or burn.
- Make sure extension cords are properly rated for their intended use, indoor or outdoor, and meet or exceed the power needs of the appliance or tool being used.
- Do not run extension cords through walls, or across doorways, ceilings or floors. This may cause the cord to overheat, creating a serious fire hazard.
- Insert plugs fully so that no part of the prongs is exposed when the extension cord is in use.
- Do not nail or staple electrical cords to walls or baseboards.
- If an extension cord is needed for a longer period of time, temporary power taps can be used when insufficient electrical receptacles are available. These devices may have 3 to 6 electrical receptacles, a circuit breaker, a 6-ft. to 15-ft. cord and a surge protector, and should bear the mark of a certified testing organization.
- Ensure that all extension cords are certified by a nationally recognized testing laboratory such as UL, CSA, or ETL, and read the manufacturer's instructions carefully.



Facts and Statistics

Extension cords are a leading cause of electrical fires, and can cause injury and death if used improperly.

According to the CPSC:

- An estimated 3,300 residential fires originate from extension cords each year, killing and injuring over 300 people.
- More than half of the injuries involve fractures, lacerations, contusions, or sprains caused by people tripping over the cords.

Continual use can cause the insulation to rapidly deteriorate, creating a dangerous shock and fire hazard.

A heavy reliance on extension cords is an indication that you have too few outlets to address your electrical needs. Have additional outlets installed by a licensed electrician where you need them.

OFFICE SAFETY CHECKLIST

ESFI recommends following important safety principles to identify and correct electrical hazards that may be present in your work environment:

Office Equipment

- Is all of your electrical equipment – computers, printers, scanners, shredders, telephones, PDAs – plugged into the same circuit? The electrical load of your equipment should be spread over several circuits.
- Are your office electronics plugged into an adequate surge protector device?
- Are grounded (3-prong) appliances and equipment plugged into grounded outlets?
- Do you protect your office electronics from possible spillage of food and beverages?
- Does all of your electrical equipment bear the mark of a nationally recognized testing laboratory?

Electrical Cords/Cables

- Are the electrical cords for your equipment placed where they cannot be cut by sharp desk or drawer edges or rolled over by chair legs?
- Are electrical cords routed across doorways or other openings? Plan ahead to avoid injuries and equipment damage.
- Do you utilize extension cords as a permanent source of power? If so, consider having additional circuits installed by a licensed electrician.
- Have you placed electric cords where there is air circulating to prevent overheating?
- Are electrical cords kept away from radiators, space heaters and/or other heat sources?
- Have you recently examined your electrical cords to check for signs of wear, fraying or cracking?

Facilities

- Are all electrical outlets in your office fully covered with outlet plates?
- Are electrical panel doors freely accessible and unblocked by furniture or clutter?





Week 3: Educating Your Children

OUTDOOR ELECTRICAL SAFETY FOR KIDS



You're In Charge!

The good news is that by understanding where electricity comes from and how it travels, you can help to safely prevent electrical fires and accidents.

You can avoid these dangers by following these important safety tips whenever electricity is near:

- Leave Power Lines Alone. Power lines create a huge electrical circuit around communities, bringing electricity to homes, schools, and buildings.
- Keep away from power lines that have fallen down.
- Avoid playing in or around trees with power lines running through them.

Substations and power transformers are Shocking. Much like power lines, substations provide houses and communities with electricity. They look like giant harmless boxes, but what's inside is very dangerous.

- Heed warning signs and stay away from substations and power transformers.

Water and Electricity Don't Mix. The human body is made up mostly of water – so, swimming in water while being struck by lightning isn't the only way to experience shock or electrocution. Touching electricity directly or touching water that is in contact with electricity will also result in a shock or electrocution. In fact, this is the case for all liquids, not just water.

- Do not swim during a storm.
- Keep any electrical devices away from water or other liquids.

Call 9-1-1 if someone gets hurt, or there is a fire.

Using electricity is something we take for granted, but using it safely is very important.

An estimated 53,000 electrical fires occur in U.S. homes each year. Most of these can be avoided by taking a few simple safety precautions.

Electricity is very powerful, and can be extremely dangerous if it is not used safely. Outside, power lines and substations are the main sources of electricity, bringing it to our houses and communities.

Electrical shock or electrocution can be caused by many circumstances including:

- Power lines that run through trees, or power lines that have fallen down due to storms.
- Being in water during a storm (lightning).
- Being in water that is found near electrical devices.
- Being outside when you see lightning.
- Coming into contact with substations located around the house/neighborhood/school.

INDOOR ELECTRICAL SAFETY FOR KIDS



You're In Charge!

You can avoid these dangers by following these important safety tips whenever electricity is near:

Respect the Cord. Electrical cords have wires inside them, carrying electricity from the wall socket to the TV, microwave, or other electrical product - so it's important to handle cords properly.

- Ask an adult if you want something plugged or unplugged.
- If given permission, only connect or disconnect a cord by the plug.
- Tell an adult when a cord is bent, cracked, or frayed.

Water and Electricity Don't Mix. The human body is made up mostly of water – so, swimming in water while being struck by lightning isn't the only way to experience shock or electrocution. Touching electricity directly or touching water that is in contact with electricity will also result in a shock or electrocution. In fact, this is the case for all liquids, not just water.

Stop the Shock. Stay away from electrical outlets, even when they're not in use.

- Keep electrical objects away from water, and water away from electrical objects.
- Keep away from cords when they're in use.
- Tell an adult when too many things are plugged into one outlet.
- Use only the plug part of a cord when plugging in or unplugging.

Fight Fires Before They Start. Tell an adult when something is too near a lamp, heater, or other hot surface.

- Keep water/drinks away from electrical outlets.
- Tell an adult when a cord is frayed, broken, or smoking.

Get Out, Get Help and Call 9-1-1. Use your escape route to get out of your home, school, or building.

Electricity is very powerful, and can cause fires, electrical shock and burn injuries if it is not used safely.

An estimated 53,000 electrical fires occur in U.S. homes each year. The good news is that most of these can be avoided by taking a few simple safety precautions.

Electrical fires and electrical shock and burn injuries from can be caused by many circumstances indoors, including:

- Frayed cords or fabrics and paper products placed too close to electrical heaters, lamps, and other hot surfaces
- Touching electrical sockets or frayed cords
- Unplugging an electrical device by pulling on the cord itself
- Touching water that is exposed to electricity
- Keep anything that uses electricity away from water and other liquids.
- Avoid showering/bathing during a storm. Electricity from lightning can travel through the water pipes.

ELECTRICAL AND FIRE SAFETY FOR YOUR FAMILY

Using electricity is something we take for granted, but using it safely is very important. An estimated 53,000 electrical fires occur in U.S. homes each year. Most of these can be avoided by taking simple safety precautions.

May is National Electrical Safety Month, and a great time to review important electrical and fire safety practices with your children and family to help keep your home safe from electrical dangers year-round!

Electrical Safety Tips

- Keep liquids, including drinks, away from electrical items such as TVs, video game consoles, and computers. They could spill and cause dangerous shocks or fires.
- Never play with electrical cords, light sockets, or electrical outlets.
- Do not overload outlets with too many plugs.
- Never yank on the cord to unplug an appliance. Hold on to the plug itself.
- If you see a broken electrical cord in your house, tell an adult. The adult should replace the cord. Never try to repair it.
- Do not play or fly kites near power lines. If your kite gets caught in a power line, let go of the kite.
- Stay away from big metal electrical boxes in your neighborhood. They're not safe to play around or sit on.
- If there is lightning, do not stand near trees. Go inside right away.
- If you drop an appliance in water, do not try to get it. Have an adult shut off the power supply to your home before retrieving the item.

Fire Safety Tips

- Have smoke alarms on every level of your home and inside each bedroom. Test your smoke alarm batteries every month.
- Make sure you have at least two ways out of each room.
- Have a family escape plan for what to do in case there is a fire.
- Hold a family fire drill twice a year.





Week 4: Remembering Safety in the Field

ELECTRICAL SAFETY IN THE WORKPLACE

Many injuries, deaths and property damage caused by workplace electrical hazards can be avoided.

The first step in avoiding these hazards begins with safety awareness. Before undertaking any type of electrical work, plan your job and include all necessary steps to ensure your safety and the safety of those around you.

Safety Tips

For those experienced in working with electricity, these points can help remind you of basic electrical safety practices:

- Complete a detailed job plan and communicate it to all co-workers.
- Know safety requirements and follow them.
- Understand the construction and operation of the electrical equipment and the hazards involved.
- Identify all possible energy sources that could pose on-the-job hazards.
- Before working on or around electrical systems or equipment, identify the load circuits and disconnect. Remember, in some cases, turning power off may cause other hazards. Such hazards and additional guidance should be addressed in your work plan.
- Select the appropriate personal protective equipment (PPE). Remember, PPE must be worn until the electrical system is in a safe condition.
- Never assume that the equipment or system is de-energized. Remember to always test before you touch.
- Use lock-out/tag-out procedures.
- Make sure your test equipment is working properly both before and after you use it.
- If at any time the job becomes more hazardous than you had anticipated, stop and revise the plans.



Facts and Statistics

- Electrical hazards cause more than 300 deaths and 4,000 injuries in the workplace each year.
- Electrical accidents rank sixth among all causes of work-related deaths in the United States.
- Electrical accidents on the job cause an average of 13 days away from work and nearly one fatality every day.
- Approximately 62 percent of an estimated 32,807 nonfatal electrical injuries occurring between 1992 and 1998 were classified as electric shock and 38 percent as electric burns.
- The nonfatal workplace incidents that cause the highest number of days away from work include contact with an electrical current or a machine, tool, appliance or light fixture (38 percent), and contact with wiring, transformers or other electrical components (33 percent).
- Nonfatal electrical injury occurs most often to those who work with machines or tools and around electrical wiring other than power lines.
- Over the last 10 years, more than 46,000 workers were injured from on-the-job electrical hazards.
- During the work day, a worker is hurt every 30 minutes so severely from electricity that it requires time off the job.