

# Springtime Home Electrical Safety

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May is National Electrical Safety Month and is a good time to reflect on our electrical safety practices. According to ESFI (Electrical Safety Foundation International), the top electrical safety hazards include:

- Electrical fires caused by aging wiring
- Misuse of surge suppressors and extension cords
- Electrocutions from wiring systems and large appliances

ESFI says that electrical systems installed during the 1970's and earlier were not designed to handle the demand that we place on them today. To ensure the electrical safety of your home, have an electrical safety inspection performed by a licensed electrician.

*Extension cords-* If an appliance draws more current than an extension cord can carry, it may cause the cord and tool to overheat, and create a fire. Before deciding to use an extension cord, ask three important questions: *Where is it going to be used?* Extension cords that can be used outdoors will be clearly marked "Suitable for Use with Outdoor Appliances." Never use an indoor extension cord outdoors; it could result in an electric shock or fire hazard. *How far is the nearest outlet from where I'll be working?* To determine what size or gauge cord you will need, you will also have to determine how long you need the cord to be. A cord, based on its gauge, can power an appliance of certain wattage only at specific distances. As the cord gets longer, the current carrying capacity of the cord gets lower. For example, 16-gauge extensions cord less than 50 feet in length can power a 1625 watt appliance. A 16-gauge cord that is longer than 50 feet in length can only power an appliance up to 1250 watts. *What is the total wattage rating of the appliance using the cord?* All appliances indicate how much wattage is consumed when operated; that rating can be found on the appliance itself. Some appliances are rated in amps of power usage rather than watts. Simple tip: if your appliance indicates that it uses 5 amps at 125 volts, then its rating is 625watts (5 X 125). Additional tips:

- Never keep an extension cord plugged in when not in use. The cord will still conduct electricity until it is unplugged from the outlet.
- Store all cords indoors when not in use. Outdoor conditions, especially in Minnesota, can deteriorate a cord over time.
- Never use extension cords as a permanent source of power. Consider finding a safer permanent solution.
- Don't have extension cords running under rugs or in door ways. This can overheat the wiring or wear down the insulation.
- Never *adapt* or force a 3-prong cord into an outlet with an outlet of two slots.
- Look for the UL mark on *all* cords showing they have been tested.

*Surge Protectors-* For items you can't leave unplugged, invest in high-quality surge protectors. Surge protectors work by monitoring the flow of electricity and diverting excess voltage either back in the system or ground. Power surges, also known as transient voltage surges, are brief spikes of power that can travel through power lines. Power surges can permanently damage computers, televisions, fax machines and other home appliances that contain sensitive electronic equipment. Many people assume that surge protectors can protect their home from lightning, when actually they can not protect your home or appliances from a direct lightning strike. Surges can also be generated from within the home. Appliances such as furnaces, air conditioners and vacuum cleaners can cause power surges in the home's electrical system when they are turned both on and off. You might have equipment plugged into a multi-socket power strip, but it's important to realize that many of these devices function simply as extension cords, providing little or no protection against power surges or overloading. Additional tips:

- Check your protection devices at home to see if they are power strips or surge protectors.
- There should be an indicator light or audible alarm so you know a high-level surge has occurred.
- Make sure the product clearly states "UL Listed Transient Voltage Surge Suppressor."
- Use only surge protectors that have an internal circuit breaker. These units will trip the breaker if the protector is overloaded or shorted to prevent overheating and fire.
- Visually inspect all surge protectors on a regular basis to ensure they are not damaged or showing signs of wear or damage.

*GFCI's and AFCI's (ground fault circuit interrupters and arc fault circuit interrupters):* Make sure your home includes GFCI's which can prevent electrocution by shutting off the circuit if they sense a "leak" of current. Install arc fault circuit interrupters (AFCI's) to help prevent fires caused by arcing, where electricity has to jump a gap. Be sure to test your GFCI's monthly and after every major electrical storm.

*When it comes to electrical fires, prevention remains the best solution.*