

PROTECTING YOUR HOME

Plugging Into Electrical Safety

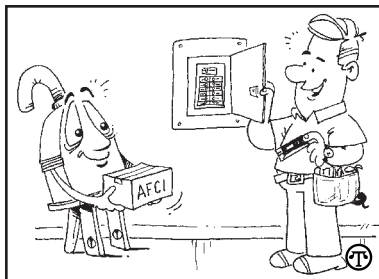
(NAPS)—Reducing the danger of certain electrical fires in a home may be as simple as installing a single device.

Arc fault circuit interrupters (AFCIs) are electrical safety devices designed to prevent fires caused by dangerous electrical arcs. According to the National Association of State Fire Marshals (NASFM), arc faults are one of the major causes of the more than 73,000 annual family-dwelling electrical-system fires. The Electrical Safety Foundation International (ESFI) recommends installing AFCI protection in general-purpose circuits throughout the home.

While ground fault circuit interrupters (GFCIs) prevent shocks by detecting “leaks” of electrical current from the circuit and acting to cut power to the circuit, the AFCI senses the particular signature of an arc—where electricity has to jump a gap—and acts immediately to shut off the circuit, preventing a fire hazard. These arcs often occur behind walls, where they can cause fires that spread rapidly undetected by smoke alarms, reducing the chances of survival.

“For example, if you’re hanging a picture and nick an electrical wire with a nail, you may trigger an arc and not be aware of the hazard,” ESFI Executive Director Michael G. Clendenin explained. “Arcing faults do not necessarily create an overload that causes a traditional circuit breaker to trip or a fuse to blow. On GFCI-protected circuits, the GFCI may not trip if the current continues along the circuit past the arc.”

According to the NASFM,



It's estimated that home electrical fires in the U.S. due to arcing lead to \$1 billion in property damage annually.

more than 80 percent of home electrical fires are attributed to arcing, leading to nearly 600 deaths, over 2,000 injuries and \$1 billion in property damage annually, 75 percent of which could be prevented through the use of AFCIs. Currently, the National Electrical Code requires AFCIs in new-home construction in the bedroom circuit, yet many electrical fires originate in areas other than the bedroom, such as kitchens, living rooms and recreational rooms. For this reason, ESFI recommends having AFCIs installed on all general-purpose circuits throughout the home, particularly in older homes where arcing hazards could have developed over several years.

For more on AFCIs and other useful electrical safety tips, order ESFI's Indoor Electrical Safety Check booklet free with a self-addressed 60-cent stamped envelope sent to ESFI at 1300 N. 17th St., Arlington, VA 22209. You can view or download this and other ESFI publications for free at www.electrical-safety.org or call 703-841-3229.