



## Fire Department, City of New York FIRE SAFETY EDUCATION

Michael R. Bloomberg, Mayor  
Salvatore J. Cassano, Commissioner

# ELECTRICAL HOME SAFETY



**H**omes today are brimming with state-of-the-art technology, entertainment and computer equipment. However, when too many lights and appliances are attached to the electrical system, it will overload and then overheat. The heat causes the wire insulation to melt and ignite, resulting in an electrical fire.

### OVERLOADED ELECTRICAL OUTLETS ARE ONE OF THE MAJOR CAUSES OF RESIDENTIAL FIRE DEATHS.

Two-thirds of all electrical fires begin in plugs or cords on appliances such as refrigerators, air conditioners or lamps. Frayed cords expose the electrical wires that spark on contact with each other or anything that can ground the electrical current.

#### MOST ELECTRICAL FIRES CAN BE PREVENTED.

**Take the proper safety measures and regularly check your electrical appliances, cords and outlets:**

- ✓ Use light bulbs with the appropriate wattage for the size of the light fixture. A bulb of too high wattage may lead to overheating and fire.
- ✓ Protect all electrical cords from damage. Do not run cords under carpets or rugs, around objects or hang from nails.
- ✓ When purchasing electrical cords or appliances, be sure that the equipment that has the Underwriters Laboratories (UL) Mark. The UL mark shows that the product has been safety tested.

- ✓ Inspect appliances regularly to make sure they operate properly. If an appliance begins to operate with a different smell, or makes unusual sounds or the cord feels warm to touch, pull the plug and discontinue use. If burning or smoking occurs from the appliance, call the Fire Department (911).

- ✓ Never use an appliance with a damaged cord. Be sure to use three-pronged electrical devices in three pronged outlets. If three-prong outlets are not available in your home, purchase a three-prong adapter from any hardware store.

- ✓ Give televisions, stereos and computers plenty of air space clearance so they won't overheat.

- ✓ To prevent overloading, never plug more than two appliances into an outlet at once or "piggyback" extra appliances on extension cords or wall outlets. Use only outlets designed to handle multiple plugs.

- ✓ Unplug appliances such as toaster ovens, hair dryers, flat irons and coffee pots when not in use.

- ✓ Check outlets and switch plates to make sure they are not unusually hot to the touch. If they are, immediately unplug the cords from these outlets and do not use the switches. Have a qualified licensed electrician check the wiring as soon as possible.

- ✓ Special attention should be given to large appliances that use high wattage, such as air conditioners, refrigerators, irons, microwave ovens, dishwashers, and deep fryers.

Avoid plugging them into the same outlet or circuit.



**DON'T DELAY!**

CALL THE FIRE DEPARTMENT **911**

SMOKE ALARMS SAVE LIVES

CARBON MONOXIDE ALARMS SAVE LIVES

SMOKE ALARMS SAVE LIVES

A Public Fire Safety Message From The New York City Fire Department

**FD  
NY**

**YOUR SAFETY IS OUR MISSION**

PROUDLY SERVING NEW YORK SINCE 1865



# GET WIRED!

## POWER STRIPS

Power strips and surge suppressors don't provide more power, just more access to the same limited capacity of the circuit to which it is connected.



Not all power strips are surge suppressors. Furthermore, in the event of a large surge or spike, the surge suppressor is a one-time-use protector and will likely have to be replaced.

If you have a heavy reliance on power strips, it is an indication that you have too few outlets to serve your needs. Contact a licensed electrician and have additional outlets or circuits installed.

## EXTENSION CORDS

Extension cords are only for temporary use. Most cannot carry as much current as permanent wiring and tend to overheat. Overheating can occur at the plug, at the socket or over the entire length of the cord.

Extension cords come in a variety of wire sizes known as gauges. The most common are 18, 16, 14, 12 and 10. The lower the gauge, the more electrical current (amps) the wire can carry. Thus, 12-gauge wire is heavier than 14-gauge wire. Therefore an extension cord of 16-gauge wire can be used for a table lamp. This is in sharp contrast to a circular saw that will require more power; therefore a heavy duty extension cord of 12-gauge wire should be used.



To determine if an extension cord is properly rated for the number and type of devices being plugged in, add the total wattage of each bulb or appliance and then divide by 120 to calculate the total number of amps. If the total amps is equal to or greater than the maximum rating of the cord, you must use a higher rated extension cord.

**When in doubt, use an extension cord that is heavier than what is required, never lighter.**

EXTENSION CORD TYPES	GAUGE	AMPS	TOTAL WATTS	Volts
LIGHTWEIGHT CORD (lamp, radio)	18 gauge	7 AMPS	875 watts	125 volts
MEDIUM USE CORD (small electrical equipment)	16 gauge	13 AMPS	1625 watts	125 volts
HEAVY DUTY CORD (computer, printer)	14 gauge	15 AMPS	1825 watts	125 volts
HEAVY DUTY CORD (electric power tools)	12 gauge	20 AMPS	5000 watts	220 volts

The ability of any cord to carry electricity decreases as the cord's length increases. So, in situations where you might otherwise be able to use a medium duty, 14-gauge extension cord, you may need to upgrade to a heavy duty 12-gauge cord when making a longer run.

**NEVER use an extension cord, regardless of the gauge with large current appliances such as refrigerators, freezers, air conditioners, clothes dryers or space heaters.** These large current appliances generate increased heat in the cord, causing it to overheat, melt or ignite.

## GROUND FAULT CIRCUIT INTERRUPTERS

Water mixing with electricity can be a shocking experience. A ground fault circuit interrupter (GFCI) will protect against accidental electric shock or electrocution by acting immediately to shut off the circuit.



Homes built since the 1970s are required to have GFCIs installed whenever an electrical outlet is within six feet of a water source such as a sink, tub or pool. However if your home was built before 1975, it is suggested that you have GFCI installed in your bathrooms and kitchen.

## HOW TO SPOT A COUNTERFEIT EXTENSION CORD

Counterfeit UL certified products pose a serious public safety concern. These extension cords have far less copper wiring than certified cords and cannot handle high levels of electricity. While spotting a fake may be difficult, the best indication is the price.



**Extension cords that sell for .99 cents are most likely unsafe counterfeit products.**



**CITY OF NEW YORK**  
9 METRO TECH CENTER  
BROOKLYN, NEW YORK 11201-3857

**FDNY FIRE SAFETY EDUCATION UNIT &  
FDNY OFFICE OF PUBLIC INFORMATION**  
[www.nyc.gov/fdny](http://www.nyc.gov/fdny)  
[www.fdnfoundation.org](http://www.fdnfoundation.org)

