Children and Electrical Outlets (Child Safety)

Every parent of young children has at some point worried about their child's safety around electrical outlets in the home. The outlets are usually installed at a height at or near a child's eye level, and a child's curiosity draws them to explore.

Statistics on Fatal Electrical Injuries in the United States

The chance of electrocution is small, but the results can be devastating. According to a 1994 estimate of electrocutions released by the Consumer Product Safety Commission (CPSC), there were 890 deaths in 1984 (1.4 deaths per million people), decreasing to 560 in 1994 (0.9 deaths per million people). These figures include all age groups and count only fatalities and not shocks and injuries. Household wiring was involved in most of the electrocutions. Here are the top three sources:

Household Wiring	18%
Large Appliances	17%
Small Appliances	16%

Electrocutions from electrical outlets are included in the Household Wiring statistics

In another study conducted in 1997, the CPSC found:

- 86 percent of the reported injuries involved children 1- to 4-years-old
- The highest frequency of home electrical injuries occurred at mealtimes
- The most commonly used foreign objects inserted into outlets were keys and hairpins

This indicates that many of the home electrocution and shock injuries involve unsupervised children. While it appears the chance of electrocution is relatively low; there are simple measures that can be taken to avoid injury or death to a child.

Plastic Outlet Protectors

Most of us are familiar with plastic outlet protectors. The prongs fit directly into the outlet holes, preventing the insertion of foreign objects. Any parent will tell you they feel a little uneasy about the effectiveness of these devices. A study conducted by Temple University seems to confirm these reservations.

In 1997, the Biokinetics Research Laboratory of Temple University studied the effectiveness of different types of plastic electrical outlet protectors. The study consisted of 37 children, 2- to 4-years-old. Three different types of outlet protectors were tested:

- One style had a round, flat face with two prongs. Forty-seven percent of the 4-year-olds and 31 percent of the 2-year-olds could remove this protector.
- Another style had a 3/16" thick oval face with a tapered side. Forty-seven percent of the 4-year-olds and 18 percent of the 2-year-olds could remove this protector.
- Another style had 1/16" thick oval face and a flat side. One hundred percent of the 2- and 4-year-olds could remove the protector!

Other Alternatives

There are other products on the market that are probably more effective in protecting children from electric shock. Here are some alternatives:

Child Tamper-Resistant Outlets

A few electrical device manufacturers make electrical outlets that are intended to prevent a child from inserting something into the outlet holes. They look just like any other outlet, but behind the face of the receptacle are plastic shutters.

These shutters are designed to remain closed until a plug is inserted. When something is inserted into both vertical outlet holes at the same time, the interior plastic shutters open. Its safety is premised on the fact that most young children will not try to stick two objects into the two vertical outlet holes at the same time.

Child Tamper-Resistant Outlet Face Covers

Several companies make electrical outlet

receptacle covers with faces that swivel or slide over the outlet holes. Some are intended as replacement face covers; others install over existing outlet face covers.

Replacing the existing outlet face cover is designed to ensure that when an electrical cord is plugged in, the prongs fully extend into the clamps inside the electrical outlet and good, sound electrical contact is made.

Costs and Where to Purchase

The child tamper-resistant outlets cost $4 to $6 each, as compared to $1 to $3 each for a typical electrical outlet receptacle. They require no additional labor to install than typical outlet receptacles. These outlets are available through your local electrical supply store or your electrician.

The electrical outlet face covers cost anywhere from $3 to $6 each. Those that replace the existing outlet face cover can be bought from your local electrical supply store or your electrician. The after-market face plate that fits over the existing outlet face plate is sold through baby product magazines, discount stores and building supply stores.

Conclusion

Plastic outlet protectors are better than no protection for your child, but studies show they are not as effective as some parents would believe. Other alternatives may be more effective in preventing injury or electrocution. By assessing your family's needs, you can choose the option that's best for you.

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