

Electrical Safety In and Around the Home

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Developed by:
**American Burn Association
Burn Prevention Committee**

Funded by:
**United States Fire Administration/
Federal Emergency Management Agency**

Fire and Burn Death and Severe Burn Injury

- **Deaths**

**4,000 deaths a year
from fire and burns**



- **Injuries**

25,000 severe injuries admitted to burn centers

600,000 burn injuries treated in hospital ED's

*(Sources: National Fire Protection Association,
National Center for Health Statistics)*

Incidence of Severe Electrical Injury

1,000 Annual Admissions to Burn Centers

- Workers
- Toddlers
- Older children
- Do-it-yourselfers

Electrical Burn Injury Topics

- **Main causes**
- **Special risks to toddlers, older children**
- **Prevention**
- **Immediate first aid response**

Electricity Dominates Our Lives



Wall Switches and Outlets



Wall Switch



Outlet

Small Investment, Big Lifesaver



GFCI =
Ground Fault
Circuit Interrupter

Testing a GFCI (Ground Fault Circuit Interrupter)



Test Button

Reset Button

Outlet Locations Needing GFCI Protection

- **Kitchen counter top**
- **Bathroom**
- **Near a wet bar sink**
- **Swimming pool, spa, hot tub**
- **All outdoor receptacles**
- **Work area**
- **Garage**
- **Crawl space**
- **Unfinished room in basement or storage area**

Special Note for Pre-1970 Construction

- Homes built before 1970 and not renovated may lack GFCI protection
- An electrician should check such homes and install GFCI protection where needed

Capacity Issue: Overloaded Electrical Outlets



Capacity Issue: Approved Power Strips



Capacity Issue: Circuits and House Service



Extension Cord Safety



Indoor



Outdoor

Extension Cord Safety Inside the Home

- **Use on temporary basis only**
- **Keep unplugged when not in use**
- **Keep slack: don't stretch tight**
- **Do not place across doorways, in heavy traffic areas, under rugs**
- **Do not staple or nail to wall**
- **Do not alter a 3-prong plug to accommodate a 2-hole outlet**

Check Cords and Plugs for Hazards



Unplug Appliances at the Plug, Not By Its Cord



Check Lamps and Light Fixtures for Bulb Wattage Recommendations



**CAUTION: Risk of Fire.
Use Maximum 60 Watt
Bulb or Lower.**

Your Kitchen: Haven or Hazard?



Keep Appliances Away from Water on a Dry Surface While in Use



Remember... Water and Electricity Don't Mix



Heating Pad and Electric Blanket Hazards

Heating Pads and Electric Blankets

- Never place anything heavy on pads or blankets
- Never sit or sleep on them
- Turn off after leaving bed

Heating pads

- Never sit or sleep on one
- Limit use to 15-20 minutes
- Use automatic switch or timer to control use

Outdoor Household Electrical Safety

- **Assure power source is GFCI-protected**
- **Use proper extension cords**
- **Practice handling equipment before connecting to power source**
- **Never use in wet conditions**

Outdoor Extension Cord Safety



- Do not use “indoor” cords outdoors
- Determine needed length and cord gauge
- Store all cords indoors when not in use

Avoid Severing Outdoor Extension Cords



Look UP and Live



Ladder



Pruning Saw

Call Before You Dig!



Call Before You Dig!

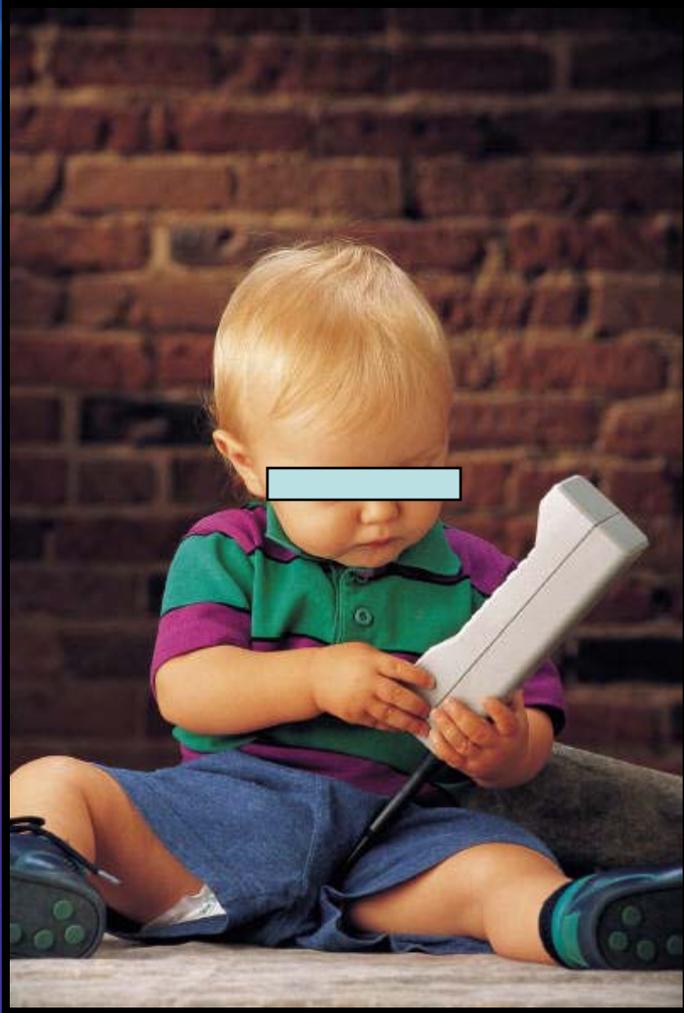
Call Before You Dig. Don't Get Burned.



Preventing Electrical Injuries to Children

- **Create and maintain a child-safe environment**
- **Begin early to make children understand the dangers of electricity**

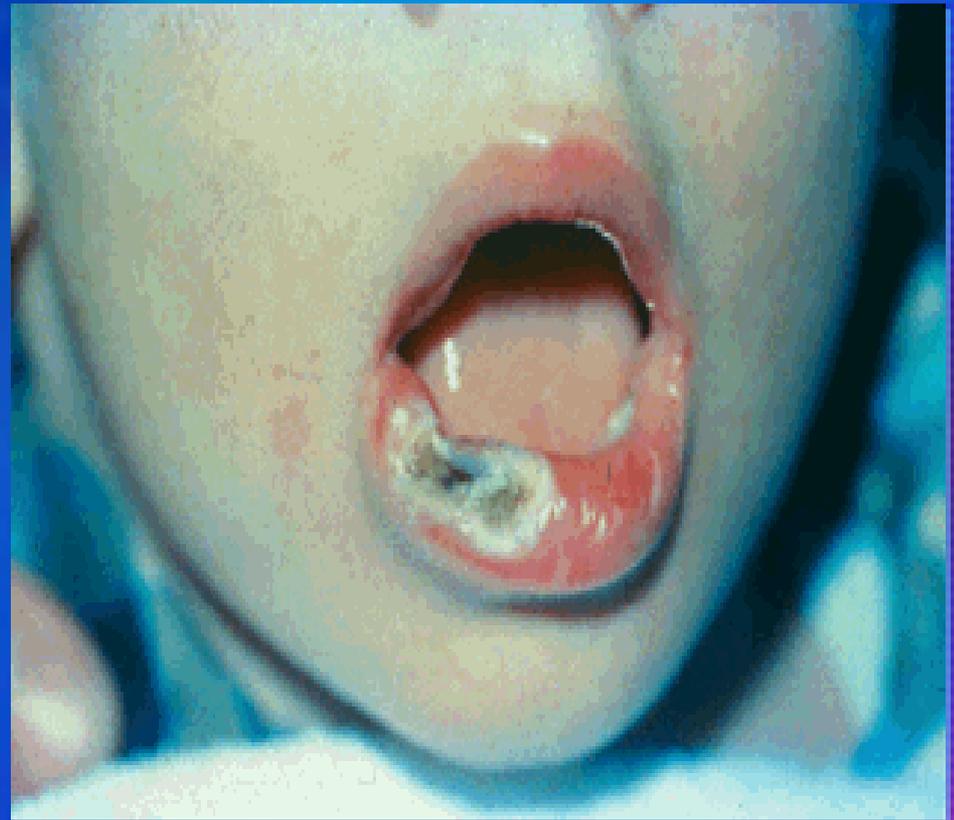
Precautions for Toddlers



- **Cover unused outlets**
- **Keep countertop appliance cords toward the back of counters**
- **Keep extension cords out of sight and reach**
- **Protect children from irons during, after use**

Preventing Electrical Injuries to Children

- **Typical electrical cord burn**



Protecting Children from Electrical Outlets



Protecting Children from Electrical Outlets



Electrical Safety Messages For Older Children

- Use electrical appliances safely – away from water or wet areas
- Keep metallic balloons indoors
- Pay special attention to outdoor hazards



Avoid Power Lines



- **Never attempt to retrieve any item from an overhead wire**
- **Keep kites and balloons away from power lines**
- **Climbing trees near a power line is doubly hazardous**

Don't Play Near Ground Transformers



Warning: High Voltage – Keep Out

Stay Away from Electrical Substations

- Respect the extreme danger of electric current passing through substations and transformers
- Respect their “Warning: High Voltage” signs and stay away



Emergency Care of Electrical Burns

Protect yourself first

- Don't be the next victim
- Don't touch patient until the power is off
- If you are unsure how to turn power off, wait for qualified help to arrive
- Never use water on an electrical fire

When the Injured Person is Safely Away from and No Longer in Contact with Electricity

- **Assess airway, breathing and circulation**
- **If the person is not breathing or has no pulse start CPR and call 9-1-1**
- **Continue CPR as needed before focusing on the burn injury**

If the Person is Conscious and Breathing

- **Stop the burning process; cool with water**
- **Call 9-1-1**
- **In high voltage injuries, do not move patient, to limit potential damage from fractures**
- **Remove jewelry and constrictive clothing**
- **Cover the person and keep warm until emergency personnel arrive**

Why Electrical Burns Always Need Medical Care

- **Electric current strongest at contact points**
- **Contact points do not predict scope of damage to underlying tissue**
- **Contact can make heart beat irregularly or stop**
- **Injured patient may need cardiac monitoring**

Conclusion

- **All electrical injuries are potentially severe and should be seen by a physician**
- **Most electrical injuries around the home are preventable**
- **Always use proper care when using electrical appliances**

Be Aware!

Always be careful when using electricity
