Scald Injury Prevention
Scald Prevention

Developed by:
American Burn Association
Burn Prevention Committee

Funded by:
United States Fire Administration/
Federal Emergency Management Agency
Fire and Burn Death and Injury

**Deaths**

4,000 deaths a year from fire and burns

**Injuries**

25,000 hospitalized in burn centers

600,000 burn injuries treated in hospital EDs

(Close to half of all burn injuries treated in hospital emergency departments and one-third of admissions to burn centers are scald injuries)

*(Sources: National Fire Protection Association, National Center for Health Statistics; American Burn Association, National Burn Repository, 2005)*
What is a Scald Injury?

- A scald injury occurs...
  - When contact with hot liquid or steam damages one or more layers of skin
Scald Prevention Topics

- What are the main sources of scald injury?
- Who are the most frequent victims?
- How can scald injury be prevented?
- What are the appropriate first-aid responses?
Frequent Scald Burn Sources

- Hot tap water
- Hot beverages
- Hot food
- Steam
Most Frequent Scald Injury Victims

- Young children
- Older adults
- People with disabilities
60% of all scald injuries are to young children

75% of all burns to young children are scalds

(Source: National Center for Health Statistics)
Young Children and Scald Injury

- Curiosity, imitation
- Limited understanding of danger
- Limited ability to react quickly to hot contact
- Thin skin = deeper burn
Older Adults and Scald Injury

- Thin skin
- Reduced mobility, agility
- Reduced ability to feel heat, due to health conditions or medication
People with Special Needs and Scald Injury

- Sensory impairment
- Mobility or other physical impairment
- Diminished mental capacity
Common Sites of Scald Injury

- **Kitchen or dining area**
  - Spills while handling or moving hot foods and liquids, often involving children

- **Bathing area**
  - Inability to remove self from hot water
Scald Injury Severity Factors

- Length of contact with hot substance
- Temperature of substance
- Nature of substance
  - Is it thick or sticky?
  - Does it retain heat?
- Extent of body area scalded
- Location of scald
Protecting Children From Scalds

- Household changes
- Everyday precautions
- Child supervision
Protecting Children from Scalds: Kitchen and Dining Areas

Household modifications

- Mark and explain a “kid-free zone”
- Put away tablecloths
- Use spill-resistant “travel mugs”
Protecting Children from Scalds: Kitchen and Dining Areas

Everyday preparations

- Keep friends, relatives, and sitters informed
- Turn pan handles away from stove front
- Observe safe microwave oven practices
- Protect electric cooking appliances and cords
Protecting Children from Scalds: Kitchen and Dining Areas

Scald-safe child supervision

- Supervise young children at all times
- Encourage use of “kid-safe” zone
- Never hold a child in your arm:
  - While preparing or serving hot food
  - While drinking a hot beverage
- Keep hot food and liquids high and out of the reach of young children
Protecting Children and Adults from Scalds: Bathing Areas

Household Modifications

- Establish safe hot water temperature
- If this is not possible, install tempering valve or safe faucet and shower heads
- Install non-slip bath, shower mats
- Install grab bar in shower stall
### Setting a Safe Hot Water Temperature

Time and temperature relationship required to scald a healthy adult

<table>
<thead>
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<th>Time</th>
<th>Temperature</th>
<th>Time</th>
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Tap Water Scald
Maximum Water Temperature Standards

- **Recommended maximum residential standard**
  - 120°F (48°C)
  - (U.S. Consumer Product Safety Commission)

- **Nursing homes and child care facilities**
  - 110°F (43°C)
  - (Recommended and by some state or local regulations)
Measuring Hot Water Temperature

- Run hot water up to two minutes at tap
- Test temperature with cooking thermometer
Establishing a Safe Hot Water Temperature

- If initial test temperature is above 120° F (48° C), lower heater thermostat setting

- Initial test temperature below 120°F/48°C may not prove safety is constant

- Retest several times until safe temperature setting is assured
Bathroom Scald Prevention - Equipment

Direct (scald prevention)

- Tempering valve
  - on water line
- Anti-scald valves
  - on shower heads and faucets
Bathroom Scald Prevention - Equipment

**Indirect (fall prevention)**

- Grab bars
- Non-slip mats
  in tub/shower, on floor
- Shower/bath seat
Bathroom Scald Prevention - Precautions

- For single control faucet, always turn on and off in the “cold” position

- For dual control faucet, always turn “cold” faucet on first, and off last

- Make sure all household members and caregivers understand these controls
Bathroom Scald Prevention - Behaviors

- Check water temperature before placing child in tub or shower
- Instruct carefully any older siblings who help bathe young children
- Young children should never be left alone in the tub
Emergency Care of Scald Injury

- Remove scald victim from source
- Remove all affected clothing, diapers, shoes, etc.
- Cool scalded area briefly with cool water
- Cover with clean, dry covering
- Do not apply creams, salves or ointments
- Call 9-1-1
Scald Prevention – Some Important Points

- Limited mobility and thin skin increase risk and severity for the young and old
- Keep young children away when cooking, or when drinking hot beverages
- Test hot water temperature and establish thermostat setting at or below 120°F/48°C