



American Burn Association

Scalds: A Burning Issue

A Campaign Kit for Burn Awareness Week 2000

Educator's Guide

- ❖ Introduction & Overview of Scald Burns
 - ◆ High Risk Groups
 - ◆ Time and Temperature Relationship
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- ❖ Scald Prevention CD
 - ◆ A Microsoft Power Point® Slide Presentation on CD with an Instructor Outline

Public Education Materials

- ❖ Tap Water Scald Prevention Fact Sheet

- ❖ Food & Beverage Related Scald Prevention Fact Sheet

- ❖ Microwave Scald Prevention Fact Sheet, Other Causes of Scald Burns & Prevention Pointers

- ❖ Emergency Care For Burns



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High Risk Groups

Scald burns are preventable! Young children, older adults and people with disabilities are most vulnerable to this type of injury. Most burn injuries happen in the home with tap water scalds occurring in the bathroom or other bathing areas. Other scalds relating to preparation or serving of food occur in the kitchen.

The severity of injury with scalds depends on two factors - the temperature to which the skin is exposed and the length of time that the hot liquid is in contact with the skin. At 120 degrees Fahrenheit / 48 degrees Celsius, the recommended temperature setting for home water heaters, skin requires five minutes of exposure for a full thickness burn to occur. When the temperature of a hot liquid is increased to 140° F / 60° C. it takes only five seconds or less for a serious burn to occur¹. Coffee, tea, hot chocolate and other hot beverages are usually served at 160 to 180° F. / 71-82° C. degrees, resulting in almost instantaneous burns that require surgery to heal. Immediate removal of the hot liquid from the skin may lessen severity, therefore splash and spill burns may not be as deep as burns to someone who falls into a bathtub.

There are many ways you can make your home safer for yourself and those you love. Your first step is to increase awareness and identify potential hazards, then make the necessary changes in your behavior and environment. Changes in environment involve eliminating the cause of the problem, thereby eliminating the risk.

High Risk Groups

Although anyone can be affected by scalds, certain people are at increased risk. These high risk groups include infants and young children, older adults and people with any type of disability. Males are about twice as likely to be scalded as females in all age groups.

Young Children

Nationwide, nearly 24,000 children are treated in hospital emergency departments every year for scald injuries². Scalds are the number one cause of burn injury to children under age four³. Young children have thinner skin resulting in deeper burns at lower temperatures than adults.

¹ Moritz, A.R., HERRIQUES, F.C. Jr. Studies of thermal injuries: II The relative importance of time and surface temperature in the causation of cutaneous burn. *Am J Pathol* 1947; 23:695-720.

² National SAFE KIDS Campaign. Burn injury fact sheet. Washington, D.C. 12/98.

³ Advanced Burn Life Support Instructor Manual. Gillespie, R.W. et. al. Omaha, NE. 1994.

The proportion of a child's body that is exposed to burning elements is also greater. For example, a cup of hot liquid will result in a larger percent of the body burned on a child than the same amount of liquid spilled onto an adult. Children have little control of their environment, have less perception of danger and lack the ability to escape a burning situation on their own. Children grow fast and can reach new, dangerous things every day. They do not realize that hot liquids burn like fire. Therefore, it is up to parents and other caregivers to provide a safe home to prevent scald burns.

Older Adults

Older adults, like young children, have thinner skin so hot liquids cause deeper burns with even brief exposure. Their ability to feel heat may be decreased due to certain medical conditions or medications so they may not realize water is too hot until injury has occurred. Older adults may also have conditions that make them more prone to falls in the bathtub or shower or while carrying hot liquids.

People With Disabilities or Special Needs

Individuals who may have physical, mental or emotional challenges or require some type of assistance from caregivers are at high risk for all types of burn injuries including scalds. The disability may be permanent or temporary due to illness or injury and vary in severity from minor to total dependency on others.

Mobility impairments, slow or awkward movements, muscle weakness or fatigue, or slower reflexes increase the risk of spills while moving hot liquids. Burns to the lap are common when a person attempts to carry hot liquids or food while seated in a wheelchair. Moving hot liquids can be extremely difficult for someone who uses a cane or walker. Sensory impairments can result in decreased sensation, especially to the hands and feet, so the person may not realize if something is "too hot." Changes in a person's intellect, perception, memory, judgement or awareness may hinder the person's ability to recognize a dangerous situation (such as a tub filled with scalding water) or respond appropriately to remove themselves from danger. While the principles of scald prevention that apply to the general population also apply to this high risk group, there are additional concerns that must be addressed.

Conclusion

Scald injuries result in considerable pain, prolonged treatment, possible lifelong scarring, and even death. Prevention of scald injuries is always preferable to treatment and can be accomplished through simple changes in behavior and in your home environment. The pages on the left side of the folder identify some of the ways tap water, cooking related and microwave scald burns can be prevented. For additional information relating to burn prevention, contact the American Burn Association at 800-548-2876 or www.ameriburn.org.

Remember, scald burns can be prevented!



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Time and Temperature Relationship to Serious Burns

<u>Water temperature</u>		<u>Time required for a third degree burn to occur</u>
155° F	68° C	1 second
148° F	64° C	2 seconds
140° F	60° C	5 seconds
133° F	56° C	15 seconds
127° F	52° C	1 minute
124° F	51° C	3 minutes
120° F	48° C	5 minutes
100° F	37° C	Safe temperature for bathing

Reference: Moritz, A.R., Henriques, F.C. Jr. Studies of thermal injuries: II The relative importance of time and surface temperature in the causation of cutaneous burns. Am J Pathol 1947; 23:695-720.



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United States Scald Statistics

- ❖ 250,000 children between ages 0-17 are burned each year seriously enough to require medical attention.
- ❖ 15,000 children are hospitalized annually with burn injuries.
- ❖ 1,100 children die each year from fire and burns.
- ❖ 200,000 children are burned by contact with hot substances and objects.
- ❖ 100,000 scalds result from spilled food and beverages. The most frequent sources of these injuries include:
 - Child pulls a pot or other container of hot liquid off the stove or counter.
 - Toddler bumps into an adult carrying or holding a hot beverage or food.
 - Toddler pulls tablecloth, spilling hot food or beverage off the table.
- ❖ 5,000 children are scalded from hot tap water. The most frequent causes of tap water scalds include:
 - Unattended child in bath turns hot water faucet or falls into hot water.
 - Inexperienced caretaker fails to test water temperature before placing child in tub.
- ❖ 60,000 children are burned by coming in contact with hot objects such as:
 - Clothing irons (toddler touches or falls against iron): 10,000
 - Hair curlers and curling irons (toddler grasps hot hair curlers or curling irons): 8,700
 - Ranges (toddler touches heating element or oven door): 5,800
 - Space heaters, floor furnaces, fireplace glass
- ❖ Deaths from scalds: 100 annually in all age groups.

Compiled by P. Brigham, Burn Foundation, Allentown, PA, 1999.

Sources: National Health Interview Survey, National Hospital Discharge Survey, National Hospital Ambulatory Medical Care Survey, National Electronic Injury Surveillance System.



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What Is A Burn?

A burn is damage to the skin and underlying tissue caused by heat, chemicals or electricity - a very simplistic definition for a very complex injury. Burns damage or destroy the skin cells. Deeper burns may involve the fat, muscle or bone. Scalds result from the destruction of one or more layers of the skin due to contact with hot liquids or steam.

The temperature to which the skin is exposed and the length of time the skin is exposed to the burning substance determine the depth of injury. Burns range in severity from minor injuries that require no medical treatment to serious, life-threatening and fatal injuries. Burns are categorized in terms of degrees, which are described below. Partial thickness injuries include first and second degree burns; full thickness injuries encompass third degree and deeper burns.

Superficial (first degree burns)

- Causes: sunburn, minor scalds
- Generally heal in 3-5 days with no scarring

Characteristics:

- Minor damage to the skin
- Color - pink to red
- Painful
- Skin is dry without blisters

Partial thickness (second degree) burns

- Damages, but does not destroy top two layers of the skin
- Generally heal in 10-21 days
- Does not require skin graft*

- Skin is moist, wet and weepy
- Blisters are present
- Color - bright pink to cherry red
- Lots of edema (swelling)
- Very painful

Full thickness (third degree) burns

- Destroys all layers of the skin
- May involve fat, muscle and bone
- Will require skin graft for healing*

- Skin may be very bright red or dry and leathery, charred, waxy white, tan or brown
- Charred veins may be visible
- Area is insensate - the person is unable to feel touch in areas of full thickness injury

*Except for very small (about the size of a quarter) full thickness burns will require a skin graft to heal. The patient is taken to the operating room where all the dead tissue is surgically removed. Skin is taken or harvested off an unburned or healed part of that person's body and grafted or transplanted to the clean burn area. In seven to 14 days, this grafted skin "takes" or adheres to the area and becomes the person's permanent skin. The donor site (where the skin was harvested from) is treated like a partial thickness burn and heals within 1- to 14 days.



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Publicity Guide

The media is one of your most powerful links to the community. One story can reach into more homes than the hardest working volunteers will be able to reach in person or at local health fairs. By gaining the interest and respect of the media, you can build awareness among parents and others and gain support for your scald prevention campaign.

You may find that reporters react as positively to your scald prevention campaign as they do to such programs as bicycle safety. The media has covered scald burns very little, because the problem has not been brought to their attention. Several elements of how to have a successful campaign have been designed to help you get coverage.

The media will be more interested in your campaign activities if you augment the national statistics with local scald burn data. Scald burn data doesn't have to be statistics alone. Facts about the experiences of being burned, the pain of treatment, rehabilitation, and the long-term emotional effects are also compelling and meaningful. Your first step should be to gather this data. Then create your own local scald burn injury fact sheet to accompany the national fact sheet.

Remember to publicize your scald prevention campaign by doing a combination of events, including:

1. Hold press conferences. Provide written supplemental information.
2. Produce an event (safety fair at local mall).
3. Suggest story ideas to Health Beat Reporters.
4. Send timely news releases to reporters and media contacts.
5. Use media support materials included in this packet.
6. Offer to do guest appearances on local radio or TV talk shows.
7. Maintain a list of burn survivors who are willing to provide positive testimonials.

Tips on Working with the Media

1. It is very important to establish a close relationship with all aspects of news media in your region...newspapers, magazines, radio and television (especially cable). If you don't already have one, develop a complete list to include the names, addresses, telephone number, fax and email numbers of all media contacts. Be sure to get the name of the representative at that publication or station that works with health and medical issues. These people change positions and/or responsibilities quite often, especially in the larger cities, so try to update the list at least twice a year. Your organization's public relations department may have this already available for you to use.
2. Establish deadlines with each contact. Know how much lead-time they need to receive articles for publication, for calendar listings and for news conferences.

3. Be concise but informative when using press releases. Make it of interest. Use local statistics when possible. Use quotes of key people involved. Be certain to include the date, contact names, and telephone numbers for further information.
4. Allow sufficient time for the release to be received and then follow up by telephone to be sure. Also, offer additional information if they need it. Supplemental written information or press packets makes it easier for the interviewer (fewer notes) and makes it less likely you will be misquoted.
5. Sample public service announcements (PSA's) have been included in this packet. Issue these and/or build your own around them using local and/or regional data or incidents when possible. A quote from the head of your local Burn Center, Chief of Staff, Fire Chief, etc. will definitely add to the content.
6. The ABA Burn Prevention Committee strongly encourages you to plan a local event and to hold a press conference at the beginning of your campaign. You may want to hold your press conference to kick off National Burn Awareness Week (the second full week in February each year). We must emphasize, however, that this "week" is only a kick off - burn awareness must continue to be promoted **all year long**. Don't stop at doing just one event. Perhaps you can plan a quarterly event and thereby reach the public four times a year.

Press Conferences

Plan ahead. Be sure you are not conflicting with any other event if possible. Plan your conference at a convenient time to allow a camera crew and/or reporter to cover the conference and still get back to the station in time to prepare the story for publication or inclusion in the local noon-time or nightly news program.

Issue a "media alert" notifying the media of the conference, the reason for it, who will be attending, date, time, place, and other details. If possible, combine forces with other concerned groups...burn center, fire department, police department, school district, or other. A burn survivor... one who has gone through the entire process, whether it be a major burn or not, can tell the story better than anyone else. They know the pain and suffering that one must deal with. Both the survivor and their families are newsworthy, but be certain they are both willing to be interviewed and prepared for the questions they may be asked. Don't add to their trauma.

Be prepared to check on the press. Know who is attending and which media they represent. Have materials ready to hand them. Utilize statistics and data from this Scald Prevention Campaign Kit.

If circumstances call for it, have your own photographer on hand who can quickly develop the photos for distribution to press members without photographers. If advance photographs can be made available, this will add to the speed with which the news can be printed.

Keep the press under control. Set an agenda, distribute it and follow it. Allow for questions and answers at the end of the conference...not during it. If necessary, limit the number of questions from a reporter and/or the amount of time it takes to answer.

Be sure to follow up with each person who attended the conference to provide them with additional information they may need and to determine when the item will run. Also, once it has run, and especially if it was a favorable item, be sure to thank the reporter... either by telephone or with a brief note.



American Burn Association

Press Release 1

For Immediate Release

Contact: Local person and title
Local phone number
or American Burn Association 800/548-2876

Burn Awareness Week February 6-12, 2000 “Scalds - A Burning Issue”

Scald injuries affect all ages. Young children and the elderly are most vulnerable. This is why the American Burn Association and its Burn Prevention Committee is involved in providing you with information on scald prevention programs.

Annually in the United States and Canada, 1.25 million people suffer burn injuries⁴. Many of these are scalds. (Insert local statistics and information here). Most burns occur in the home, especially the kitchen and bathroom.

Remember - scalds can be prevented through increased awareness of scald hazards and making simple environmental or behavioral changes to decrease risk of injury to you and the people you care about.

For more information about preventing scalds, contact the American Burn Association at 800/548-2876 or (local organization) at (phone number).

⁴ Burn Foundation. Burn Incidence and Treatment in the United States 1999 Fact Sheet. Philadelphia, PA.



American Burn Association

Press Release 2

For Immediate Release

Contact: Local person and title
Local phone number
or American Burn Association 800/548-2876

Burn Awareness Week February 6-12, 2000 “Scalds - A Burning Issue”

Scald injuries are painful and require prolonged treatment. They may result in lifelong scarring and even death. Prevention of scalds is always preferable to treatment and can be accomplished through simple changes in behavior and the home environment.

In conjunction with Burn Awareness Week, February 6-12, 2000, the American Burn Association and its Burn Prevention Committee (and local organization) is providing information relating to scald burns for use in your own communities.

“Although anyone can sustain a scald burn, certain people are more likely to be scalded --- infants, young children, older adults and people with disabilities. These high risk groups are also more likely to require hospitalization, suffer complications and recovery is more difficult,” says Janet Cusick, RN, ABA Burn Prevention Committee Chair (*local person can be also be quoted*). “Most burn injuries occur in the person’s own home and the vast majority of these injuries could have easily been prevented.”

Tap water scalds are often more severe than cooking-related scalds. Nationwide, tap water scalds result in more inpatient hospitalizations, generally cover a larger percent of the person’s body, and result in

more fatalities than other types of scalds⁵. The American Burn Association recommends the following simple safety tips to decrease the risk to yourself and those you love from tap water scalds.

- Set home water heaters no higher than 120 degrees Fahrenheit / 48 degree Celsius. An easy method to test this is to allow hot water to run for three to five minutes, then test with a candy, meat or water thermometer. Adjust the water heater and wait a full day to allow the temperature to change. Re-test and re-adjust as necessary.
- Provide constant adult supervision of young children or anyone who may experience difficulty removing themselves from hot water on their own. Gather all necessary supplies before placing a child in the tub, and keep them within easy reach.
- Fill tub to desired level before getting in. Run cold water first, then add hot. Turn off the hot water first. This can prevent scalding in case someone should fall in while the tub is filling. Mix the water thoroughly and check the temperature by moving your elbow, wrist or hand with spread fingers through the water before allowing someone to get in.
- Install grab bars, shower seats or non-slip flooring in tubs or showers if the person is unsteady or weak.
- Avoid flushing toilets, running water or using the dish- or clothes washer while anyone is showering.
- Install anti-scald or tempering devices. These heat sensitive instruments stop or interrupt the flow of water when the temperature reaches a pre-determined level and prevent hot water that is too hot from coming out of the tap.

Cooking-related scalds are also easy to prevent. Some things you can do to make your home safer from cooking-related burns include:

- Establish a “safe area” out of the traffic path between the stove and sink where children can safely play and still be supervised. Keep young children in high chairs or play yards, a safe distance from counter- or stovetops, hot liquids, hot surfaces or other cooking hazards.
- Cook on back burners when young children are present. Keep all pot handles turned back, away from the stove edge. All appliance cords should be coiled and away from the counter edge. Curious children may reach up and grab handles or cords, pulling hot food and liquid down onto themselves. The grease in deep fat fryers and cookers can reach temperatures higher than 400 degrees Fahrenheit and cause serious burns in less than one second.

⁵ National SAFE KIDS Campaign. Burn Injury Fact Sheet. Washington, DC. December 1998

- During mealtime, place hot items in the center of the table, at least 10 inches from the table edge. Use non-slip placemats instead of tablecloths if toddlers are present. Young children may use the tablecloth to pull themselves up, causing hot liquids or food to spill down onto them.
- Never drink or carry hot liquids while carrying or holding a child. Quick motions may cause spilling of the liquid onto the child.

Microwave ovens, although perceived by many as safer than conventional ovens and stoves, heat foods and liquids to very high temperatures that can result in burns from spills, splashes and release of steam.

Microwave safety tips include:

- Never heat bottles of baby formula or milk, especially if using plastic bottle liners. In the microwave, plastic liners may burst, increasing the scald risk to infants.
- Place microwave ovens at a safe height, within easy reach for all users, to avoid spills. Microwaves should be placed so that the faces of children and people who use wheelchairs are higher than the front of the door.
- Steam, reaching over 200 degrees Fahrenheit, builds rapidly in covered containers and can easily result in burns to the face, arms and hands. Puncture plastic wrap or use vented containers to allow steam to escape while cooking. Or, wait at least one minute before removing the covering. When removing covers, lift the corner farthest from you and away from your face or arm.

For more information about preventing scald burns, contact the American Burn Association at 800/548-2876 or www.ameriburn.org. (*Local information for contacts can be inserted here instead.*)



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Public Service Announcements

SUBJECT

HOT LIQUIDS
SCALD PREVENTION

CONTACT

Name: _____
Organization: _____
Telephone: _____

Start use: Immediately
Stop use: Indefinitely

READING TIME: 10 SECONDS

“Hot liquids burn like fire” and can injure the people you love. Call the (insert local identification) for free scald prevention tips at (phone number).

READING TIME: 20 SECONDS

Scalds are the number one cause of burn injuries among children in the U.S. and Canada. The (insert local identification) reminds you to supervise young children near stoves and cooking appliances. For free burn safety tips, call (insert local identification) at (phone number).

READING TIME: 30 SECONDS

“Hot liquids burn like fire!” That is just one of the messages the (insert local identification) wants you to remember this week. Scalds are the number one cause of burn injuries and deaths to children under four. Remember to supervise children when you are cooking or drinking hot liquids and to turn water heaters down to 120 degrees Fahrenheit.

The (insert local identification) has free burn safety tips that will help keep your family safe from burns. For more information, call (local phone number).



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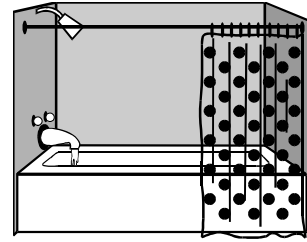
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Tap Water Scalds

Tap water scalds are 100 percent preventable. Tap water scalds, very common among young children, older adults and people with disabilities, are often more severe than cooking related scalds. These high-risk groups are less likely to survive the injury, hospitalization is longer, and recovery more difficult.



Nationwide, tap water scalds result in more inpatient care, generally cover a larger area of the person's body, and end in more fatalities than other types of scalds. Tap water scalds to children usually occur when a child is left unattended in the bathroom for even a brief time, when he or she is placed in water that is too hot, being bathed by an inexperienced caregiver (baby-sitter or older sibling), are in the tub when another child turns on the hot water, or when the child falls into the tub. Tap water scalds to older adults or someone with a disability usually happen when they slip or fall in the tub or shower, a caregiver fails to recognize that the water is too hot, when water temperature fluctuates due to running water in other parts of the home, or a faucet or plumbing fixture malfunctions and the person is unable to escape a sudden burst of scalding water.

The American Burn Association recommends the following simple, safety tips to decrease the risk to yourself and those you love from tap water scalds.

- ❖ **Adequate and constant supervision is the single most important factor in preventing tap water scalds.** Provide constant adult supervision of young children, anyone who may experience difficulty removing themselves from hot water on their own, or people who may not recognize the dangers associated with turning on the hot water. Gather all necessary supplies and keep them within easy reach. If you must leave the bathroom, take the child with you.
- ❖ Fill tub to desired level and turn water off before getting in. Run cool water first, then add hot. Turn hot water off first. This can prevent scalding in the event someone should fall in while the tub is filling. Mix the water thoroughly and check the temperature by moving your elbow, wrist or fingers with spread fingers through the water before allowing someone to get in. The water should feel warm, hot to touch.
- ❖ **The safest temperature for bathing is about 100°F / 37°C.**
- ❖ Do not leave the bathroom unattended while the tub is filling.
- ❖ Turn the faucet to the "COLD" position when not in use if the tub has a single faucet handle.
- ❖ Clearly mark the "HOT" water position on faucets.
- ❖ Do not allow young children or a person with a mental disability to adjust the water temperature.
- ❖ When bathing young children, seat the child facing away from faucets and so he or she can not reach the faucet. Turn the faucet to the "COLD" position.
- ❖ Set home water heaters no higher than 120°F / 48°C. An easy method to test this is to allow hot water to run for three to five minutes, then test with a candy, meat or water thermometer. Adjust the water heater and wait a full day to allow the temperature to change. Re-test and readjust as needed.
- ❖ Install grab bars and non-slip flooring or mats in tubs or showers if someone is unsteady or weak. Use a shower chair or stool when bathing or showering if standing unassisted is a problem. Provide a

way to call for help (bell or whistle) for people who may need assistance or may be unable to remove themselves from the tub or shower in case of emergency.

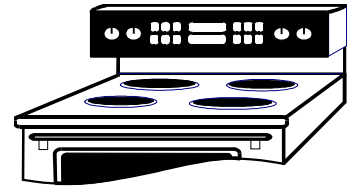
- ❖ Avoid flushing toilets, running water, or using the dish- or clothes-washer while anyone is showering to avoid sudden fluctuations in water temperature.
- ❖ Consider keeping the bathroom door closed when not in use.
- ❖ Reinforce these recommendations with baby-sitters and other care providers.
- ❖ Install anti-scald* devices.

*Thousands of people suffer scald injuries every year due to sudden surges of hot water. Anti-scald devices, anti-scald aerators, and scald guards are heat-sensitive devices that stop or interrupt the flow of water when the temperature reaches a pre-determined temperature (generally 110 to 114 degrees, but before it reaches 120°F / 48° C.) and prevent hot water from coming out of the tap before scalding occurs. These devices will not allow the faucet to become fully operational until the water temperature is reduced to a safe level. Some devices allow the resident to preset a comfortable maximum temperature to eliminate the risk of scalding. Whole house anti-scald mixing valves installed in a hot water line are also available.

Anti-scald devices can simply and inexpensively be installed on most existing taps in showers, bathtubs and sinks. These are especially beneficial for people living in multi-family or apartment buildings when the family is unable to lower the temperature of the water heater. Anti-scald devices are available at some local hardware, plumbing and baby stores.

Caution: Each residence (house, apartment, mobile home, RV) has special plumbing needs. It is important to evaluate which type of device is best suited for your own home to protect your family from tap water scalds. It is also important to test the temperature with your hand or elbow.

Food & Beverage Related Scalds



Cooking-related scalds are common in all age groups, but are especially serious for young children, older adults and people with disabilities. Children get burned when they upset cups of coffee, hot tea, hot chocolate or other hot beverages, grab dangling appliance cords or pot handles, or pull on hanging tablecloths. Adults receive cooking related scalds by way of hot liquid spills or when attempting to move containers of hot liquids.

Although these burns may cover a smaller surface area than tap water scalds, they are often deeper because of the higher temperature and are likely to result in the need for surgical skin grafting. These injuries usually occur in areas where food is prepared or served.

The American Burn Association recommends the following tips to make your home safer and help prevent scalds from food and beverages.

IN THE COOKING AREA

- ❖ Establish a safe area, out of the traffic path between the stove and sink, where children can safely play but still be supervised.
- ❖ Place young children in high chairs or play yards a safe distance from counter or stove tops, hot liquids, hot surfaces or other cooking hazards while preparing or serving food.
- ❖ Child walkers are extremely dangerous and should never be allowed in kitchens or bathrooms. Infants in child walkers have increased mobility and height and can more easily come in contact with dangling cords and pot handles.
- ❖ Provide safe toys for children, not pots, pans and cooking utensils, to occupy a child's attention. Young children are unable to distinguish between a "safe" or "play" pan that they perceive as a toy and may reach for a pan on the stove.
- ❖ Cook on back burners when young children are present.
- ❖ Keep all pot handles turned back, away from the stove edge. All appliance cords need to be kept coiled and away from counter edges. Curious children may reach up and grab handles or cords. Cords may also become caught in cabinet doors causing hot food and liquids to spill onto you or others. The grease in deep fat fryers and cookers can reach temperatures higher than 400 degrees and cause serious burns in less than 1 second.
- ❖ When removing lids from hot foods, remember that steam may have accumulated. Lift the cover or lid away from your face and arm.
- ❖ If young children want to help with meal preparation, give them something cool to mix in a location away from the cooking. Do not allow a child to stand on a chair or sit on the counter next to the stove.
- ❖ Children should not be allowed to use cooking appliances until they are tall enough to reach cooking surfaces safely. As children get older and taller and assume more cooking responsibilities, teach them safe cooking practices.
- ❖ Check all handles on appliances and cooking utensils to guarantee they are secure.
- ❖ Consider the weight of pots and pans. Attempt to move only those items that you can easily handle. Wear short sleeve or tight-fitting clothing while cooking.

- ❖ Always use oven mitts or potholders when moving pots of hot liquid or food.
- ❖ Keep pressure cookers in good repair and follow manufacturer's instructions.
- ❖ Avoid using area rugs in cooking areas, especially near the stove. If area rugs are used, ensure they have non-slip backing to prevent falls and scalds.

IN THE DINING AREA

- ❖ During mealtime, place hot items in the center of the table, at least 10 inches from the table edge.
- ❖ Use non-slip placemats instead of tablecloths if toddlers are present - young children may use the tablecloth to pull themselves up causing hot food to spill down onto them. Tablecloths can also become tangled in crutches, walkers or wheelchairs, causing hot liquids to spill.

HOT BEVERAGES

- ❖ Never drink or carry hot liquids while holding or carrying a child. Quick motions (reaching or grabbing) may cause the hot liquid to spill, burning the child or adult.
- ❖ Do not make hot coffee, tea or hot chocolate in a mug that a child normally uses. Consider using mugs with tight-fitting lids, like those used for travel, when children are present.
- ❖ Do not place hot liquids on low coffee or end tables that a young child can reach.

SPECIAL CONSIDERATIONS FOR PEOPLE WITH MOBILITY IMPAIRMENTS

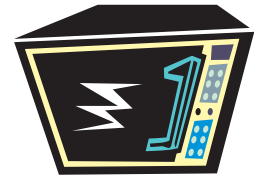
- ❖ If it is necessary to move hot liquids while using a wheelchair, place a large, sturdy tray with a solid lip in your lap to decrease the risk of lap burns.
- ❖ A tray in the lap may also prevent burns from hot foods or beverages if someone is unsteady or shaky.
- ❖ Use a serving cart to transfer food from the stove to the table top instead of carrying it.
- ❖ Consider alternate cooking equipment (slow cookers, toaster ovens or microwaves) placed on lower counters or tables if the stove or oven is too high to safely reach. Be aware this may create a burn hazard if young children are present.

COOKING METHOD	APPROXIMATE TEMPERATURE	
Deep frying	500° F	260° C
Baking	400° F	204° C
Frying	300° F	148° C
Boiling	212° F	100° C
Electric Crock Pot	200° F	93° C
Hot Beverages	160-180° F	71-82° C

It takes less than one second for a third degree burn to occur from these cooking methods.

Continuous and adequate supervision of children is the single most important factor in preventing scald burns. Be sure all caregivers are aware of burn safety practices.

Microwave Scald Prevention



Microwave ovens are perceived by many families as “safer” than conventional ovens and stoves, but they heat foods and liquids to very high temperatures, resulting in burns from spills, splashes and release of steam.

In many families, children are permitted to use the microwave but not other heating appliances. The face and upper body are the most common areas burned on children. Hands, arms, abdomens and legs are more frequently injured with adults.

Please read and follow manufacturer’s instructions for your microwave and follow the safety pointers listed below.

The American Burn Association recommends the following simple, safety tips to decrease the risk to yourself and those you love from microwave scalds.

- ❖ Place microwaves at a safe height, within easy reach, for all users to avoid spills. The face of the person using the microwave should always be higher than the front of the door. All users should be tall enough to reach the microwave oven door, easily view the cooking area, and handle the food safely. Microwaves installed above counters or stoves can be a scald hazard for anyone.
- ❖ Children under age 7 should not operate the microwave unless they are closely supervised. Instruct and supervise older children.
- ❖ Never heat baby bottles of formula or milk in the microwave, especially those with plastic bottle liners. When the bottle is inverted, plastic liners can burst, pouring scalding liquids onto the baby. Always mix the formula well and test on the back of a hand or inner wrist before feeding.
- ❖ Steam, reaching temperatures greater than 200 degrees, builds rapidly in covered containers and can easily result in burns to the face, arms and hands. Puncture plastic wrap or use vented containers to allow steam to escape while cooking. Or, wait at least one minute before removing the cover. When removing covers, lift the corner farthest from you and away from your face or arm.
- ❖ Steam in microwave popcorn bags is hotter than 180 degrees. Follow package directions, allow to stand one minute before opening, and open bag away from the face.
- ❖ Foods heat unevenly in microwaves. Remember, jelly and cream fillings in pastries may be extremely hot, even though outer parts feel only warm.
- ❖ Microwaved foods and liquids may reach temperatures greater than boiling without the appearance of bubbling. Stir and test food thoroughly before serving or eating.

Other Causes of Scald Burns & Prevention Pointers

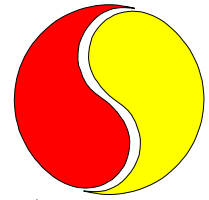
- ❖ **Potpourri pots**, especially those filled with oil, reach very high temperatures.
 - ◆ Locate potpourri pots where they can not be tipped and out of the reach of children.

- ❖ **Hot Steam Vaporizers**—older models work at very high temperatures.
 - ◆ Replace hot steam vaporizers with a cool mist humidifier or vaporizer.
 - ◆ If you must use a steam vaporizer:
 - ◆ Place on a level surface to prevent tipping.
 - ◆ Keep out of the reach of children.
 - ◆ Allow the water to cool before emptying the vaporizer.

- ❖ **Home Radiators**
 - ◆ Do not remove or release pressure valves.
 - ◆ Repairs should be performed by a professional.

- ❖ **Radiator scalds**—common injuries, primarily to adult males. When the car is running and the radiator working properly, the temperature of the fluid is normally between 195 ° and 220° degrees - hot enough to cause serious burns in less than one second. Radiator caps are clearly marked “DO NOT REMOVE CAP WHEN ENGINE IS HOT” or similar warning for a reason. When the radiator overheats, the temperature increases drastically and pressure builds. When the cap is removed, the liquid boils or even explodes out, causing serious injuries. Faces, hands, arms and chests are the most common areas burned. In addition to scalds, radiator fluid contains antifreeze that may cause chemical burns.
 - ◆ **Prevention is simple - do not remove the cap until the engine has cooled.**

Emergency Care for Burns



❖ **Stop the burning process.**

Remove all diapers and clothing from around the burn area - these will retain heat, increasing the damage to the skin. If material is adherent (stuck) to the skin, cool the area with cool water and seek medical attention. Jewelry and metal such as belt buckles and zippers also need to be removed.

❖ Run cool—not cold—over the burn area for a few minutes.

- ◆ **Do not** apply ice to the burn. Ice can make the burn worse.
- ◆ **Do not** apply creams, ointments or salves.
- ◆ **Do not** break any blisters until seen by a physician.

❖ Cover with a clean, dry cloth.

❖ First and second degree burns smaller than the person's palm can usually be treated at home. Keep the area clean to prevent infection by gently washing with mild antimicrobial soap several times a day. Rinse thoroughly. Cover open areas with a clean, loose dressing. Consult with your family physician or local burn center if the burn does not heal in two to three days or signs of infection appear. Burns larger than the person's palm should be evaluated by a physician.

❖ For larger burns (bigger than the person's palm) or a burn that involves the face, airway, hands, feet or genital area call 911 or your local emergency number.

❖ **Electric Burns** may be caused by household current, outside power lines, certain batteries or lightning.

- ◆ Protect yourself! Do not touch the victim until you are sure the power has been disconnected, the plug disconnected from the source, or the patient is free from the electricity.
- ◆ Once the victim is free from the source, treat the burns as described above.
- ◆ Electricity can cause the heart and breathing to stop. CPR may be necessary.

❖ **Chemical Burns** can be caused by contact with many household cleansers, lawn products, fresh cement or other chemicals.

- ◆ Gently brush any dry chemicals off the skin.
- ◆ Flush affected area with running water for at least 20 minutes or until an emergency worker tells you to stop. If the affected area continues to burn, continue to flush until the pain stops.
- ◆ If eyes are involved, continue to flush until help arrives.
- ◆ Remove any contaminated clothing.

❖ **When Should You Seek Medical Attention?**

- ◆ All burns on the face, hands, feet, major joints or genital area should be considered serious and need to be evaluated by a physician.
- ◆ All chemical and electric burns should be seen by a physician, damage might not be immediately obvious.
- ◆ Burns occurring in an enclosed space such as a house or car may result in smoke inhalation and should be evaluated.
- ◆ Burns that are white, gray, leathery or painless should be considered serious.
- ◆ Burns bigger than the person's palm should also be evaluated by a physician.

