



Burn Safety and Prevention for Older Adults



 **New York-Presbyterian**
 Weill Cornell Medical Center



The William Randolph Hearst Burn Center (Hearst Burn Center) is one of the largest and busiest burn centers in the nation. We treat almost 5,000 patients—one-third of which are children—each year.

By offering the comprehensive care—from the emergency response to rehabilitation—to treat patients and families who have suffered a burn injury, the Hearst Burn Center and NewYork-Presbyterian/Weill Cornell Medical Center provide the expertise, resources and continuity of care needed to get the best results.

To make an appointment to see a doctor, or if you would like to learn more about burn prevention, please call the Hearst Burn Center at NewYork-Presbyterian Weill Cornell Medical Center:

Main Office/Appointments: (212) 746 – 5410
Burn Outreach/Education: (212) 746 – 5417

**William Randolph Hearst Burn Center at
 NewYork-Presbyterian Hospital**
 525 East 68th Street, New York, NY 10065

<http://nyp.org/services/burn-center.html>

BURN STATISTICS:

- Each year, 45,000 Americans are hospitalized for burn injuries.¹
- Adults aged 65 years and older who live in New York City are more than three times as likely to be hospitalized with a burn injury than those of the same age living in the rest of New York State.²
- Burns from fire and hot liquids (scalds) are the leading causes of burn injuries among older adults.³
- Most burns happen at home.³

1

BURN INJURIES

A burn is an injury from heat, cold, chemicals, radiation, or electricity. Burns can be minor or very serious, depending on what part and how much of the body is hurt.

Burns can affect different layers of the skin (Figure 1):

- **First-degree burns:**
 The top layer of skin (epidermis) turns red/pink and is mildly painful. Some swelling may occur but no blisters form.
- **Second-degree burns:**
 The top and middle layers of skin (dermis) are injured, causing blisters, pain, and swelling. The blisters may break, and the skin underneath will be red/pink and wet.

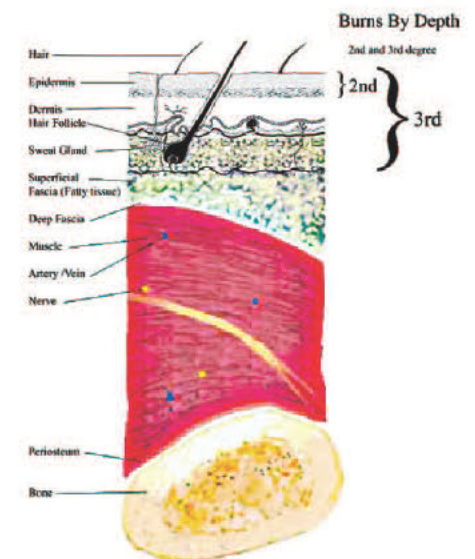


Figure 1: Layers and parts of the skin.

BURN SAFETY AND PREVENTION FOR OLDER ADULTS

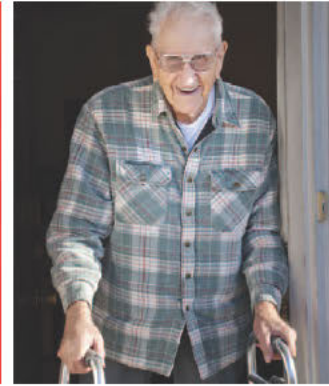
2

- **Third-degree burns:** All skin layers are destroyed, and the skin becomes white, dry, and painless.

Burns can affect how we move, look, and feel about ourselves. These injuries can happen in seconds, but recovery can take weeks, months, or years.

HOW BURNS HAPPEN

Each year, thousands of older adults get burned from fire, hot liquids (scalds), hot objects (contact), chemicals, radiation (energy), and electricity. Burns can happen at home, work, or play.



3

CHANGES IN OUR BODIES OVER TIME

Certain factors linked to how our bodies change over time can also increase the risk of burn injuries:

- As we age, the ability to move quickly out of harm's way may lessen or become more difficult. Our skin also becomes thinner and more prone to injury.
- Memory can decrease over time. It can become easier to forget about hazards such as leaving food cooking on the stove or forgetting to put out burning candles.
- Medical conditions (such as diabetes or tremors) or age-related changes in the ability to feel, see, and hear can also increase the risk of burns. Over time, feeling how hot the bath water is or hearing a smoke detector can become very difficult.
- Some medications can cause you feel sleepy, dizzy, or shaky. This can lead to burns from spilling hot foods or drinks, falling asleep with a lit cigarette, or falling in a hot tub or shower.



BURN SAFETY AND PREVENTION FOR OLDER ADULTS

4

PREVENTING BURNS

There are many simple steps that you can take to prevent burn injuries.

Scald Burns

Many scald burns happen while cooking, eating, and bathing, but there are other ways we can get burned from hot liquids. Follow these tips to prevent these burns:

- Turn pot handles in when cooking at the stove.
- Cook on the back burners of the stove when possible.
- Keep a 3-foot zone of safety around the stove, oven, and microwave to allow for a safe work space.
- Allow food and drinks to cool before serving, eating, or drinking.
- When heating food in the microwave, use microwave safe cookware with a cover that allows steam to escape.
- When frying, use a pot lid or splash guard to prevent grease splatter.
- Set the water heater temperature to a maximum of 120°F or ask the building staff to do so for you.
- Check the water temperature with a thermometer—not your hands or feet—before getting into the tub or shower or soaking in a basin.
- Avoid bathing anyone with limited mobility under running water. This may include infants, young children, and adults.
- When using a humidifier, choose one that uses a cool mist instead of hot steam.



Fire Safety

Over one million fires occur throughout the United States each year, resulting in thousands of burn injuries and deaths, as well as billions of dollars in property damage. Many of these fires can be prevented by following these tips:

- Never leave food unattended on the stove.
- Set a timer as a reminder to turn off the stove, oven, or toaster.
- When cooking at the stove, oven, or BBQ, wear short sleeves or tight-fitting clothes. Keep long hair tied back.
- Keep the stovetop and oven clear of paper, towels, and anything that can burn.
- If a grease fire occurs:
 - Turn off the stove and, if possible, use baking soda or a pot lid to smother the fire.
 - Do not move the pan or lid; leave them in place until cool.
 - Never use water to put out a grease fire. It can spread the fire.
- If a fire occurs in the oven:
 - Turn off the oven, close the door, and wait until the oven has cooled down before opening.
- Avoid using the stove or oven to heat your home.
- Clear a 4-foot area around space heaters and turn them off when leaving the room or before going to sleep.
- Plug appliances such as the stove, refrigerator, or space heater directly into an outlet. Do not use an extension cord with appliances.
- Place candles on a solid surface and at least 4 feet away from curtains, bedding, paper, and clothing.

BURN SAFETY AND PREVENTION FOR OLDER ADULTS



6

- Use candle holders large enough to catch melting wax and trim wicks to $\frac{1}{4}$ inch.
- Do not leave burning candles unattended. Put them out before leaving the room or going to bed.
- Use aerosols (such as perfume, body spray, hair spray, cleaning agents) away from matches, lighters, candles, stoves, pilot lights, or any other open flames.
- If smoking, use deep ash trays and put out cigars/cigarettes in water. Empty all ashtrays into the toilet or a metal container before going to sleep.
- Check beds, furniture, and carpet for cigars/cigarettes and ashes which may have fallen.
- Never smoke in bed, while going to sleep, after drinking alcohol, or taking medication/drugs.
- Place warning signs on the doors of homes where home oxygen is used.
- Avoid smoking when an oxygen tank is in use.

Contact Burns

Burns from touching hot objects can be very serious. Contact burns can be prevented by following these tips:

- When using appliances that get hot (such as an iron), make sure the device and cord are placed out of the reach of children and where no one can touch or trip over it while still hot.
- Cover all radiators and steam pipes.
- When using a heating pad or electric blanket, choose one that has a timer that will shut off the device automatically. Make sure it has the UL (Underwriters' Laboratory) symbol to ensure quality and safety.
- Avoid placing a heating pad or hot water bottle directly on the skin.

7

- Use oven mitts and pot holders when cooking at the stove, oven, BBQ, or microwave.
- Place beds and furniture at least 4 feet from radiators, steam pipes, and heaters.
- Before getting into the car, check for hot seats and buckles. If you park directly in the sun, cover the seat with a towel or place a sunshield in the window.

Chemical Burns

Chemicals that we use everyday can cause a serious burn if they get in our eyes, on our skin, or in our lungs. Here are some ways to prevent chemical burns:

- Wear rubber gloves when using chemicals or cleaners.
- Store chemicals in their original bottles.
- Avoid mixing chemicals.
- Open the windows or doors when using chemicals to prevent the fumes from irritating your eyes or lungs.
- Use chemicals away from matches, lighters, cigarettes, and any open flame.
- Keep the phone number of the local poison control center by the phone: 1-800-222-1222.



BURN SAFETY AND PREVENTION FOR OLDER ADULTS

8

Electrical Burns

Electricity is all around us and powers almost everything we do. When misused, electricity can cause fires, serious burns, and other injuries. Here are ways to safely use electricity:

- To avoid overloading a single outlet, use a power strip when plugging in multiple devices.
- Check the condition of all cords, electronic devices, appliances, heaters, and power tools with each use. Replace the device immediately if the cord is broken or cracked, or if the device overheats, smokes, or sparks.
- If outlets or light switches are hot when touched, unplug the cord or shut off the light immediately. Ask an electrician to check them before using.
- Disconnect electrical appliances and devices by pulling on the plug, not the cord.
- Unplug small appliances (such as toaster ovens and coffee pots) before going to bed and whenever they are not in use.
- Use extension cords for short periods of time and in places where you can see them. Avoid placing them under a rug or behind furniture.
- When changing light bulbs, only use replacements that are at or below the maximum recommended watts. Make sure the light is OFF before changing the bulb.
- Use electrical appliances away from water.
- Make sure hands are dry before touching any electrical cord, outlet, or circuit.
- Use electronic devices and appliances such as space heaters, heating blankets, and TVs with the Underwriters' Laboratory (UL) symbol to ensure quality and safety.
- Place and use lamps on flat surfaces or floors only.



9

Sun Safety

The outdoors can be safe and enjoyable. Exposure to the sun—even for a short time or on a cloudy day—can lead to a sunburn. To protect you and your family from too much sun, follow these sun safety steps:

- Always wear sunscreen when outdoors.
- Choose a sunscreen that protects from ultraviolet A (UVA) and B (UVB) sunlight, is water resistant, and has an SPF (sun protection factor) of 15 or higher.
- Always apply sunscreen to the skin at least 30 minutes before going outdoors. Reapply every 1-2 hours and after swimming, sweating, or exercising.
- Limit your time in the sun. If possible, stay indoors between 10am and 4pm when the sun is strongest.
- When in the sun, wear sunglasses with UV protection, a hat, long sleeves, and pants or a long skirt when possible.



BURN SAFETY AND PREVENTION FOR OLDER ADULTS

10



11

BURN SAFETY WITH YOUNG CHILDREN VISITING OR LIVING IN THE HOME

- Keep young children away from the stove, oven, BBQ, and microwave when in use.
- Make sure hot food and drinks have cooled before giving them to a child or placing them within the child's reach.
- Heat baby bottles using a cup of warm water instead of the microwave.
- Avoid using tablecloths and placemats that can be pulled by babies and young children.
- Store matches and lighters out of the reach of young children.
- Avoid placing an infant on an adult bed to prevent falling or rolling onto a radiator.
- Use and store chemicals out of the reach of children.
- Teach children not to touch electrical cords and outlets or play in areas where electrical equipment is stored.
- Place plastic plug covers in unused electrical outlets.
- Check with the doctor before putting sunscreen on children 6 months of age or younger or on to children with sensitive skin.



SMOKE ALARMS AND CARBON MONOXIDE DETECTORS

In many areas, smoke alarms and carbon monoxide detectors are required by law. They can save the lives of you and your family—but only if they are installed correctly and kept in good condition which includes having working batteries. Here's how to make sure you and your family are protected by smoke alarms and carbon monoxide detectors:

- Install smoke alarms and carbon monoxide detectors on each level of your home, including the basement and attic, near the kitchen, and outside of all sleeping areas.
- Test batteries monthly and change them at least twice a year (when we change our clocks) AND whenever the detectors "chirp."
- In the event of a nuisance alarm, do not disconnect or remove working batteries from smoke alarms or carbon monoxide detectors.
- Replace smoke alarms every 10 years and carbon monoxide detectors every 5 years.
- Use smoke alarms and carbon monoxide detectors with the UL (Underwriters' Laboratory) sign to ensure quality.

FIRE/EMERGENCY SAFETY PROCEDURES

You and your family can take steps to make sure you know what to do in case of a fire or any other emergency:

- Keep entry/exit routes within your home clear and free of clutter.
- Know two ways to escape from your room and house.

BURN SAFETY AND PREVENTION FOR OLDER ADULTS

12

- Make and practice a fire escape plan with everyone who lives in your home.
- Have a meeting place outside of your home.
- To exit during an emergency, always use the stairs—never use elevator.
- Call 9-1-1 for the fire department, police, or ambulance in an emergency.
- Once outside of your home, NEVER go back in until you have been told by an official that it is safe to return.

SPECIAL SAFETY CONSIDERATIONS

- Make sure that your family has an emergency escape plan which accounts for any special needs that you or your family members may have (such as use of a wheelchair or cane, helping babies or young children to escape).
- If you or a family member is hearing impaired, install and maintain a flashing or vibrating smoke alarm and carbon monoxide detector.
- Some homes or buildings may have safety bars on windows or doors which should have an emergency release. Know how to use these devices in case you need to exit quickly in an emergency.
- To help prevent burns and falls in the bathroom, install grab bars and use non-slip rubber mats in tubs or showers.
- Use a shower chair or stool when bathing if standing alone or for long periods of time is difficult.
- Exposure to cold temperatures can also cause burns (known as frostbite) or dangerously low body temperatures (known as hypothermia). During cold weather, wear clothing and coats in layers, insulated gloves, a hat, and waterproof, insulated shoes to stay safe.



In an Emergency:

911

13

WHAT TO DO IF THERE IS A FIRE

- Stay calm.
- Do not try to put out the fire.
- Get low and go! Crawl along the floor to get out.
- Use your escape plan to exit right away. Do not bring belongings with you.
- Close the door behind you.
- Call 9-1-1 from a safe location.
- Get out and stay out! Do not go back inside until you have been told that it is safe to do so.

WHAT TO DO IF YOU GET BURNED

Stop the burn:

- Stop, drop and roll if your clothes are on fire.
- Take off your clothes if they are soaked with hot liquids or chemicals.
- Remove the burned clothing.
- If the clothing is stuck to the skin, leave it.

Cool the area:

- Use cool water on the burned areas. Avoid ice and cold water.

Clean the burn:

- Keep the area clean and do not apply creams, ointments, butter, toothpaste, sprays, or other home remedies.

Wrap the burn:

- Cover the burn with a clean, dry cloth or towel.

Call for help:

- Dial 9-1-1 and get medical help right away.

Directions to the Burn Hearst Burn Center at NewYork-Presbyterian/Weill Cornell Medical Center:

By Subway

Take the #6 train to East 68th Street. Walk four blocks east to York Avenue, or take the M66 bus eastbound to York Avenue.

By Bus

Take the M31 to the East 69th Street stop, directly in front of NewYork-Presbyterian/Weill Cornell. (The M31 operates north and south on York Avenue, and across town on 57th Street.) Crosstown buses M66, and M72 allow you to transfer to the M31 at York Avenue.

By Car

Approaching from south of East 68th Street — Take the FDR Drive northbound to the 61st Street exit. Turn right onto York Avenue and go north to 68th Street.

Approaching from north of East 68th Street — Take the FDR Drive southbound to the 71st Street exit. Turn left onto York Avenue and go south to 68th Street.

References:

1. American Burn Association. Burn Incidence and Treatment in the United States: 2011 Fact Sheet. Available at URL: http://ameriburn.org/resources_factsheet.php?PHPSESSID=1aa6e187336bf385052c8bc823fcbdd3. [Accessed 2012 Feb 10].
2. Bessey, PQ. Hospitalization for burns in New York State 1995-2004 [dissertation]. New York (NY): Columbia University; 2006. 95p.
3. American Burn Association. National Burn Repository 2011. Version 7.0. Available at URL: <http://ameriburn.org/2011NBRAAnnualReport.pdf>. [Accessed 2012 Feb 12].

This information is brief and general. It should not be the only source of your information on this health care topic. It is not to be used or relied on for diagnosis or treatment. It does not take the place of instructions from your doctor. Talk to your health care providers before making a health care decision.

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