



## Burn Safety and Prevention



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

## Burn Injury Facts:

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- Each year, 40,000 Americans are hospitalized for burn injuries.
- Almost half of all burns happen at home.
- Scalds from hot liquids are the leading cause of burns among young children.
- Burn injuries can happen in seconds, but their effects can last a lifetime.

## What Is A Burn?

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 affected.

Burns can affect different layers of the skin:

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

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## How Burns Happen

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

## Preventing Burns

The good news is that there are many simple steps that you and your family 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 scald burns:

- Turn pot handles inward when cooking at the stove.
- Cook on the back burners when possible.
- Make a 3-foot safety zone around the stove, oven, and microwave when cooking to work safely and avoid others.
- Allow food and drinks to cool before carrying, serving, eating, or drinking.
- Keep young children away from the stove, oven, and microwave when in use.
- Place hot food and drinks out of the reach of children.
- Heat baby bottles by placing them into a cup of warm water instead of using the microwave.
- Avoid using tablecloths and placemats that can be pulled by babies and young children.
- 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.
- Check the water temperature before getting into the tub or shower or soaking in a basin.
- Avoid bathing babies, kids, and adults with limited mobility under running water.



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- Set the water heater temperature to a maximum of 120°F.
- If using a humidifier, choose one that uses cool mist instead of hot steam.
- If your car overheats, remove the radiator cap only after the engine has cooled.

### Fire Safety

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

- While cooking:
  - Never leave food unattended on the stove.
  - Wear short sleeves or tight-fitting clothes. Tie back long hair.
- Keep the stovetop and oven clear of paper, towels, and anything else 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.
- Clear a 3-foot area around space heaters and avoid plugging them into an extension cord.
- Store matches and lighters out of the reach of children.
- Place candles on a solid surface and at least 3 feet away from curtains, bedding, paper, and clothing.
- Use candle holders large enough to catch melting wax and trim wicks to ¼ inch.
- Do not leave burning candles unattended; put them out before leaving the room or going to bed.

### Fire Safety (continued)

- Use aerosols (such as perfume, body spray, hair spray, bug spray, cleaning agents) away from matches, lighters, candles, stoves, pilot lights, lit cigarettes, or any other open flames.
- If smoking, use deep ash trays, put out cigars/cigarettes in water and check beds, furniture, and carpet for cigarettes and ashes which may have fallen.
- Never smoke in bed, while going to sleep, or when impaired by alcohol/medication/drugs.
- Place warning signs on the doors of homes where home oxygen is used and avoid smoking when an oxygen tank is in use.
- Leave fireworks to the professionals!
- Before using your grill, make sure all of the parts—including the gas tank—are in good condition. If you notice any leaks, cracks, or breaks, replace the parts before using.
- If using lighter/starter fluid (accelerant) on the barbeque (BBQ):
  - Choose one that is made specifically for grilling.
  - Avoid using gasoline or kerosene.
  - Keep the container away from the grill.
  - Only add to coals before lighting.
  - Avoid spilling on clothing or in area near grill.
  - If you do spill, shower and change clothing, and hose the affected areas before using the grill.
- Use an insulated, fire retardant barbeque mitt and BBQ tools with long handles.
- Start the grill only after opening the cover.
- Keep a fire extinguisher in the grilling area.
- Store propane tanks in a well-ventilated, protected area away from any dwelling.

### Contact Burns

Burns from touching hot objects can happen in less than one second, but can be very serious. Using these tips can help to prevent these injuries:



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- When using appliances that get hot (such as an iron), make sure that the device and cord are out of the reach of children and placed where no one can touch or trip over it while still hot.
- Cover all radiators and steam pipes.
- Use oven mitts and pot holders when cooking at the stove, oven, or microwave.
- Place beds and furniture at least 3 feet from radiators, steam pipes, and heaters.
- Avoid placing an infant on an adult bed to prevent falling or rolling onto a radiator.
- Use a protective screen around a fireplace and handle it using firesafe gloves.
- 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.
- Always wear shoes when walking, running, or playing outdoors.
- Keep children at least 3 feet away from the moving belt of a treadmill.

## Chemical Burns:

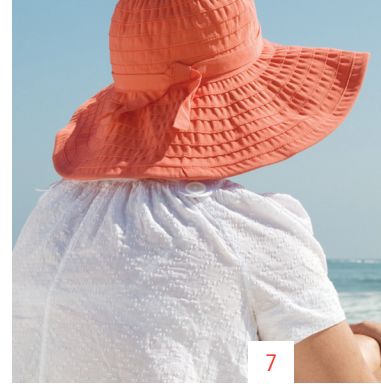
Chemicals that we use everyday at home or work can cause a serious burn if they get in our eyes, on our skin, or in our lungs. Here are some ways to prevent chemical burns:

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

## 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:

- Use a power strip when plugging multiple devices into one outlet.
- Check the condition of all cords, electronic devices, appliances, and power tools with each use and replace them immediately if the cord is broken or cracked, or the device overheats, smokes, or sparks.
- If outlets or light switches are hot when touched, unplug the cord or shut off the light immediately and have an electrician check before using.
- Disconnect electrical appliances and devices by pulling on the plug, not the cord.
- Unplug small appliances (such as toaster ovens) 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 and make sure the light is off before changing the bulb.
- Place plastic plug covers into unused electrical outlets.
- Use electrical appliances away from water.
- Make sure hands are dry before touching any electrical cord, outlet, or circuit.
- Use electronic devices with the Underwriters Laboratory (UL) mark to ensure quality and safety.
- Teach children not to touch or bite electrical cords and outlets, or play in areas where electrical equipment is stored.



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### Sun Safety

Working or playing outside can be safe and enjoyable, but 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, follow these sun safety steps:

- Always wear sunscreen when outdoors. If your child is 6 months of age or younger or has sensitive skin, check with your doctor before using.
- 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 and if possible, stay indoors between 10am – 4pm when the sun is the strongest.
- When outdoors, wear sunglasses with UV protection, a hat, and a long sleeve t-shirt and pants when possible.

### Preparing For Safety:

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 any room and your house.
- Make and practice a home fire escape plan with your family.
- Have a meeting place outside of your home.
- If you leave your home because of an emergency, never go back in until you have been told by an official that it is safe to return.
- To exit during an emergency, always use the stairs—never use the elevator.
- Call 911 for the fire department, police, or ambulance in an emergency.

### 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 (daylight saving time) AND whenever the detectors “chirp.”
- 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.

### Special Safety Considerations

- Make sure that your family's emergency escape plan 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 deaf or hard of hearing, 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 before an emergency happens.
- 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.



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### What To Do If There Is a Fire

- Stay calm.
- Do not try to put out the fire.
- Get low under the smoke and go.
- Use your fire escape plan to get out right away. Do not bring belongings with you.
- Close the door behind you.
- Call 911 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 it's stuck, 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 911 and get medical help right away.

## Directions to the 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.

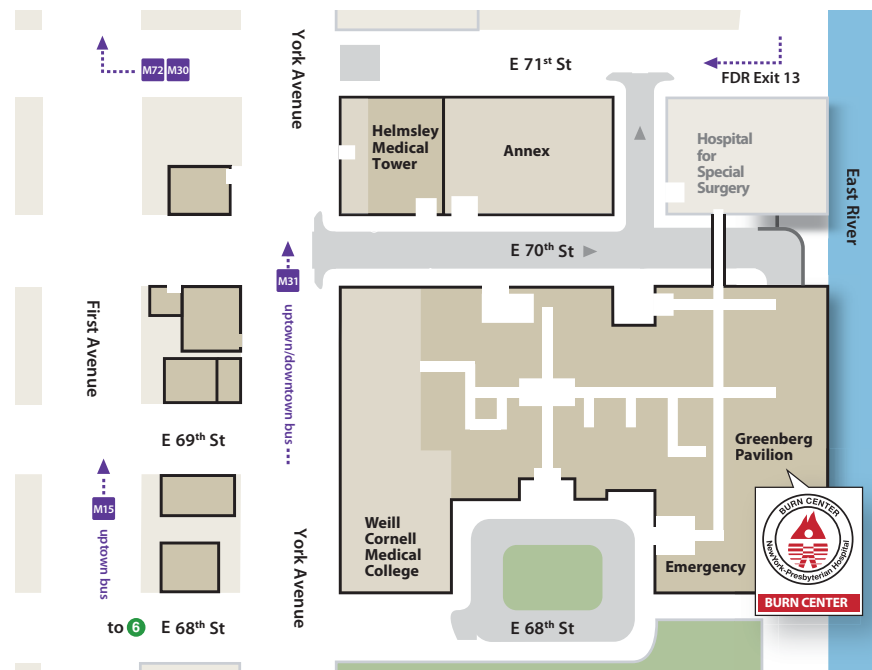
### By Bus

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 M30, M66, and M72 allow you to transfer to the M31 at York Avenue.

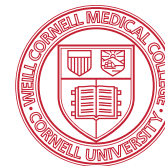
### By Car

**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.



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**The William Randolph Hearst Burn Center** at NewYork-Presbyterian/Weill Cornell Medical Center is one of the largest and busiest burn centers in the nation. We treat nearly 5,000 patients—one-third of whom are kids—each year.

By providing all phases of treatment—from the emergency response to rehabilitation—to patients and families who have suffered a burn injury, the Burn Center provides 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, L706, New York, NY 10065

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

If you or your family member gets burned, call 911 and seek immediate medical attention!

*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 upon 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.*