Massachusetts Burn Injury Reporting System

2003 Annual Report

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Massachusetts Burn Injury Reporting System

2003 Annual Report

Publication Number: **CR1062-78-350-7/04-DFS**
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Executive Summary

In 2003, the nineteenth full year of the Massachusetts Burn Injury Reporting System (M-BIRS), 51 acute care hospitals and other health care facilities reported 416 victims of burns. Forty-six (46) of these 416 victims received care at two Massachusetts hospitals and were reported to the system twice. M-BIRS was established in the Department of Public Safety in 1984 as a tool to help fire service and law enforcement personnel identify arsonists that may have been burned while setting fires. M-BIRS, along with the Office of the State Fire Marshal, was carried over to the newly created Department of Fire Services in 1996. It remains a joint program of the Department of Fire Services and the Massachusetts Department of Public Health. The "Burn Registry" also provides valuable data on the nature of the burn problem in the Commonwealth.

Massachusetts is renowned for its medical institutions and in particular for the advanced treatment available for burn and trauma victims. Many advances in treatment that have lead to increased ability for victims to survive serious burn injuries took place in Massachusetts. Those advances occurred in the desperate days after the deadly 1942 nightclub fire at Boston's Coconut Grove.

26 Victims of The Station Nightclub Fire Received Care in MA Hospitals
The nightclub fire was on everyone's mind when a fire at The Station nightclub occurred on February 20, 2003 in West Warwick, Rhode Island. With 100 dead and almost 200 injured, it was the fourth deadliest nightclub fire in United States history[3]. Twenty-six of the victims were treated at Massachusetts hospitals. Some were brought to Massachusetts hospitals because Rhode Island hospitals were already overwhelmed and some were brought specifically for the advanced treatment of burn injuries available here. The Shriners Burns Hospital, which only treats children, made an exception for the first time and took in an adult patient in the face of this horrific disaster. Seven of the 26 treated at Massachusetts hospitals were reported to have life-threatening burn injuries and two subsequently died from their injuries.

On behalf of the people of Massachusetts, the State Fire Marshal and the staff of the Department of Fire Services, I offer condolences to those who lost loved ones in the tragic fire at The Station nightclub. Our hearts go out to those who survived this nightmare.

Statutory Authority for M-BIRS in MGL 112, Section 12A
According to Massachusetts General Law (MGL) Chapter 112, Section 12A, the treatment of all burn injuries extending over 5% or more of a person's body surface area must be reported immediately to the State Fire Marshal.

M-BIRS Has Two Main Purposes — Identifying Arsonists and Burn Prevention
Data collected by the Massachusetts Burn Injury Reporting System is used in several ways. Investigators use the data to determine if an arsonist was treated for a burn that resulted from an

[3] Source: Fire Safety in Assembly Occupancies: Summary of NFPA Code Changes Since Rhode Island and E2 Nightclub Tragedies, National Fire Protection Association (NFPA), 2004.

attempt to illegally burn a building or vehicle. If these burns are not reported promptly, arsonists may continue to light fires that threaten life and property.

Our data has also been used to identify problems that need to be addressed by public education or regulation or development of appropriate intervention strategies. We need to know what type of activity injures whom, if the injuries are seasonal and how old the victims are to develop and implement effective prevention programs. We appreciate the efforts of the many dedicated doctors, nurses and clerical personnel who report the burn injuries promptly and completely. They make the program work.

Painful, disfiguring and expensive burn injuries exact a tremendous toll from their victims, their families and society. The statistics in this report illustrate the need for more burn prevention education and indicate to whom specific safety messages should be targeted.

State Fire Marshal Stephen D. Coan invites health and medical professionals, classroom and community educators, day care teachers and elder service workers to join with him in making the Commonwealth safer from burn injuries.

Program to Reduce Scalds to Restaurant Kitchen Workers
In an effort to protect workers, often teenagers, who are burned working in restaurant kitchens, the Department of Fire Services and the Mass. Department of Public Health have collaborated with the Mass. Restaurant Association to develop a poster on first aid for burns in restaurants.

Scalds Caused 36% of Reported Burn Injuries
Scalds have been the leading cause of burn injuries for the past 18 years. In 2003, scalds caused 149 or 36% of the burn injuries reported to M-BIRS. Spilled hot beverages caused the majority of scald burns. Hot tap water, cooking liquids and grease, and hot food also caused scald burns.

Keep Hot Liquids Away from Babies and Preschoolers
In 2003, young children were the most frequent victims of scald burns. Half of the 149 scald victims were under five years old, and most were less than one year old. Children under five years of age were eight times more likely to be scalded. Hot beverages posed the greatest risk to young children; parents and caregivers of young children must remember that it is dangerous to drink coffee or tea while holding a baby.

Set Hot Water Heaters at 125° F or Lower
Hot tap water is also a danger to very young children. It takes only one second of exposure to water at 155°F to cause a third degree burn. Hot water heaters should be set to temperatures of 125° F or lower. Massachusetts state law states that the temperature must be set between 110°F and 130°F. Parents should never leave a baby or toddler alone in a bath. Young children like to turn knobs and use levers and they may turn on the hot water when a parent is distracted.

Kitchen is a Dangerous Place
A significant number of the burn injuries occur in the kitchen each year. Flame burns such as sleeves igniting while cooking, scald burns from grease splatters and hot liquids while cooking, many hot coffee and tea spills, contact burns from touching hot stoves, take place in the kitchen.

Since we must cook every day, we must learn to do so safely. Children should also be kept in a safe area such as a high chair or playpen while cooking is taking place.

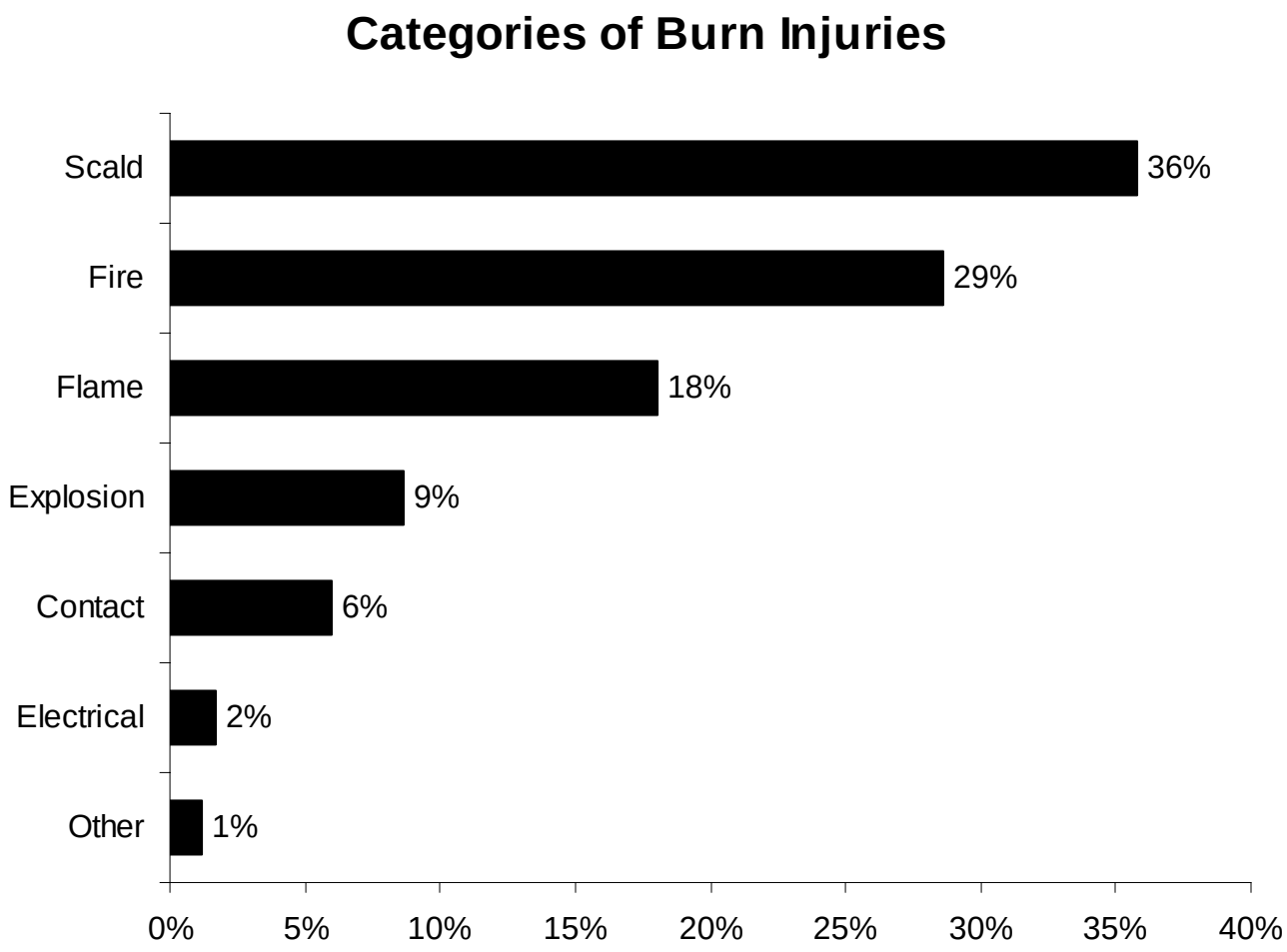
1/2 of Burns from Fires Occurred in Homes
Burns from fires were the second highest cause of burn injuries in 2003 accounting for 29% of the burn injuries in 2003. Burn injuries from house fires caused nearly half (45%) of all fire-related burns. Burns from other structure fires caused nearly one-quarter (23%) of these types of burns.

12% of Burns Work-Related
Hospitals reported that 12% of the burn victims were burned while working, up from the 11% reported in 2002, and down form the 14% in 2001. Ninety-four percent (94%), of the people burned while working were male.

65% of Burns Occurred in the Victim's Home
Of the 416 burn injuries reported to M-BIRS in 2003, 270, or 65%, occurred in the victim's home or surrounding yard. The majority (44%) of these burn injuries were scalds. Fourteen (14), or 5%, of the home-related burn injuries resulted in the victim succumbing to his or her injuries.

Causes of Burn Injuries

In this report, we look at burn injuries in two different ways. In the first section, we look at the type of incident that caused the burn. Was the burn caused by a fire, a flame, a scald or something else? A burn is said to result from a flame when the fire is confined to the victim or the victim's clothing. When a wider area burns, the injury is considered to result from fire.

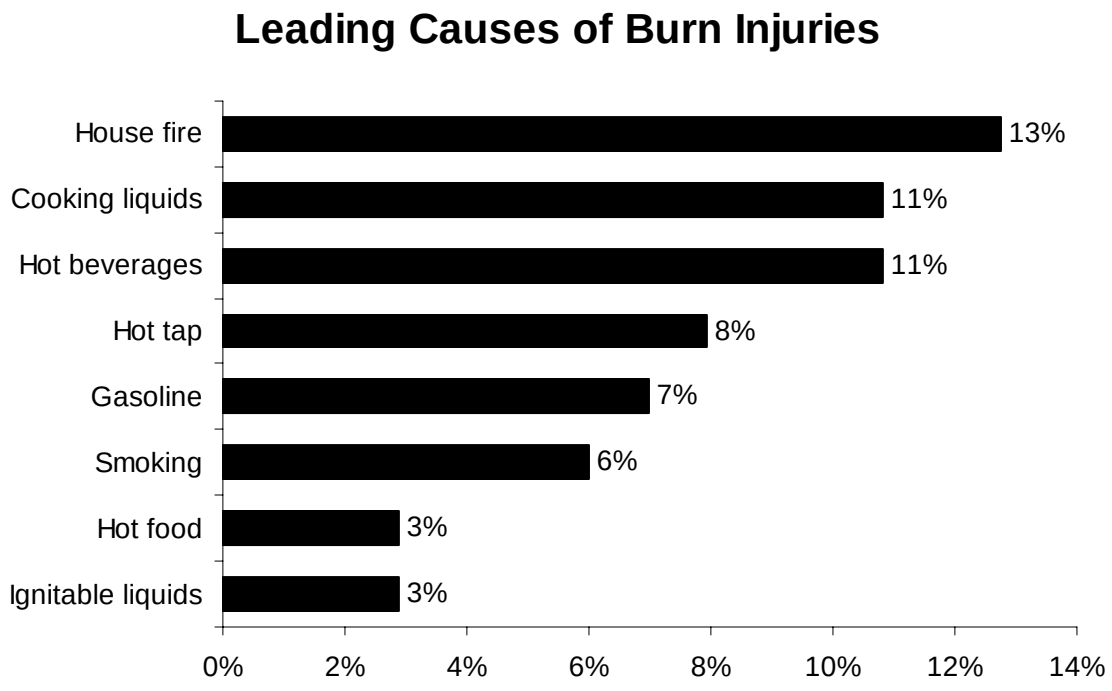


We also look at more specific causes such as hot beverage scalds or incidents involving gasoline.

Type of Incidents Causing Burn Injuries

More Than 1/3 of All Burn Victims Never Come Near a Flame
Scalds from hot liquids, cooking grease and steam caused 36% of the 416 burn injuries reported in 2003. Twenty-nine percent (29%) were caused by fires. Flames from burning clothing, bedding or similar objects caused 18% of the burns; 9% were caused by explosions; and 6% were caused by contact with hot objects. Electrical incidents such as electrocutions, flashburns[1] and explosions caused 2% of the burns. One percent (1%) of the reported burns in 2003 had other causes, such as chemical burns or sunburns.

Look at Specific Causes and Equipment to Develop Prevention Strategies
To develop effective burn prevention policies and programs, we must first look at the specific items or behaviors that caused the burns. House fires caused 13% of the total burns in 2003. This is a major change since hot beverages are usually the leading cause of burn injuries in the Commonwealth. Eleven percent (11%) of the 416 burn injuries reported in 2003 were scalds from hot beverages. Another 11% of the burns were caused by cooking liquids. Hot tap water caused 8% of the burn injuries. Gasoline ignitions caused 7% of the reported burn injuries. Smoking caused 6% of the burn injuries in 2003. Scalds from hot foods were responsible for 3% of the reported burn injuries in Massachusetts in 2003. Ignitable liquids also accounted for 3% of the burns reported in 2003. For more information, please refer to the table *Specific Causes of Burn Injuries* in the Appendix.

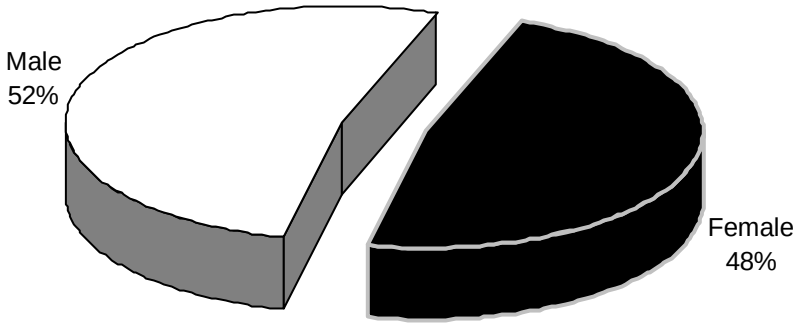


[1] A flashburn is a burn caused by short-term exposure to super-heated air generally from an explosion; there is no direct contact with flame.

Burn Injuries Caused by Scalds

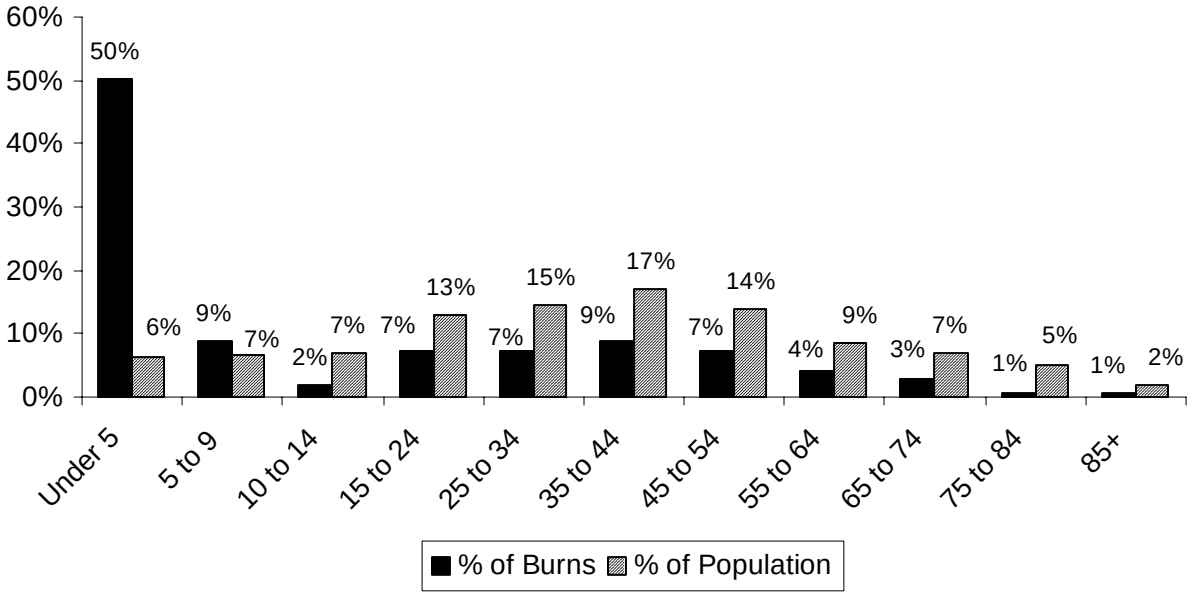
Scalds Caused 36% of All Burns
Scalds have been the leading cause of burn injuries every year since the inception of M-BIRS. One hundred forty-nine (149), or 36%, of the 416 reported burns were hot scalds. Fourteen (14), or 9%, of the 149 scalds occurred while the victim was working. Seventy-eight (78), or 52%, of the 149 scald victims were male and 71, or 48% were female.

Scald Burns by Gender



Children Under 5 Years Old Were Most at Risk for Scald Burns
Young children were the most frequent victims of scald burns. According to the 2000 U.S. Census, children under the age of five comprised 6% of the Massachusetts population. However that same age group accounted for half, or 50%, of all scald burns in 2003. Fifty-one, or 34%, were infants one year old or younger. Children aged five to nine accounted for 9%, while children aged ten to fourteen accounted for 2% of these injuries.

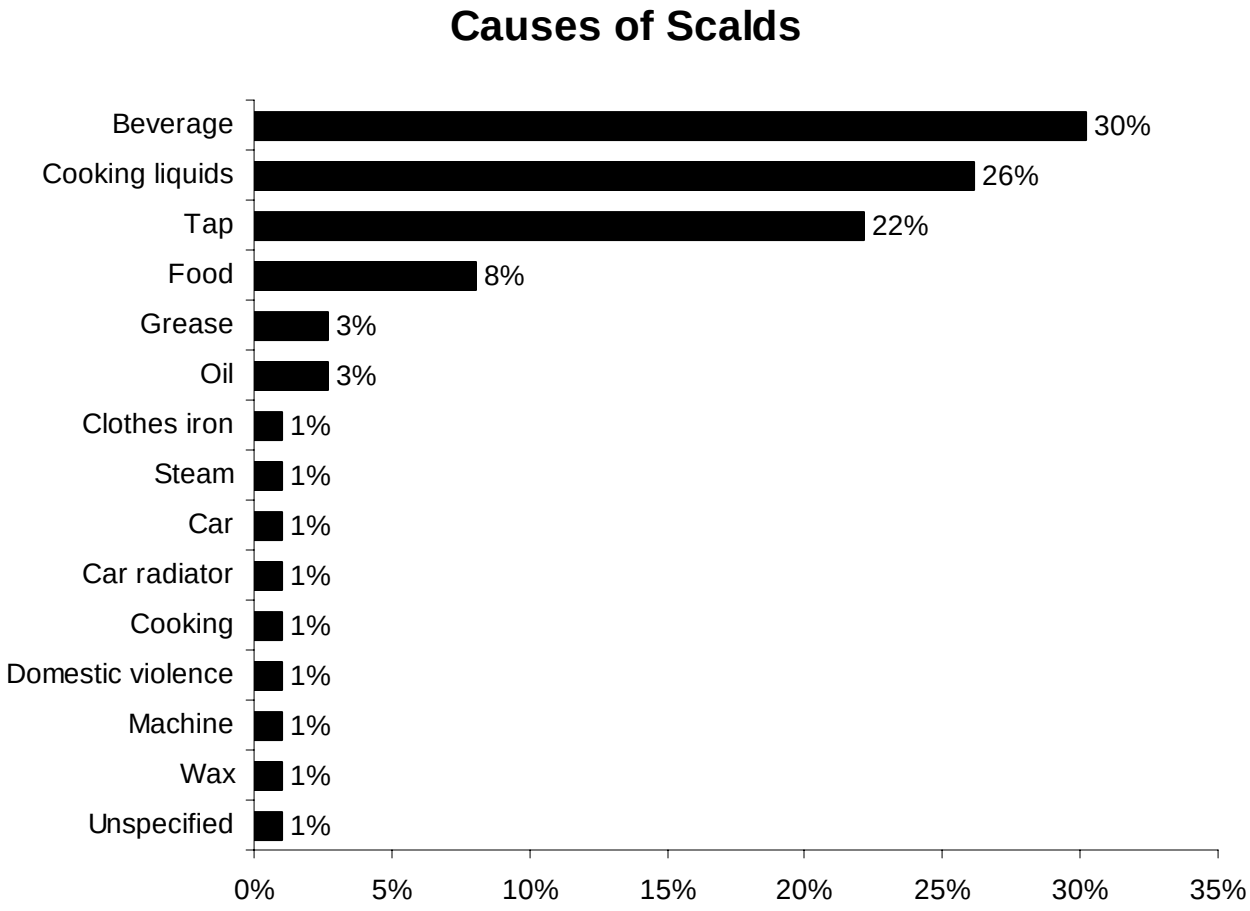
Scalds by Age Group



Many adults also suffered burns from scalds. Seven percent (7%), were between 15 and 24 years old; another 7% were between 25 and 34; 9% were between 35 and 44 years of age; 7% were between 45 and 54; 4% were between 55 and 64; 3% were between 65 and 74; 1% were between 75 and 84; and 1% were over the age of 85. A two-month old girl was the youngest scald burn victim, while the oldest person to have one of these burns was an 86-year old woman. When the shaded bar of the graph representing the percent of scald burns is higher than the striped bar representing percent of population, higher than expected risk at this type of injury exists. Only pre-schoolers and children between five and nine were scalded at a disproportionate rate; they were nearly 10 times more likely to suffer a scald burn.

Hot Beverages Caused 30% of All Scald Burns

Spilled hot beverages caused more scalds and more burn injuries than any other cause. This has been the trend of the past ten years that was only interrupted in 1999 when hot cooking liquids was the leading cause by one percentage point over hot beverages. Thirty percent (30%), of the 149 scald burns were caused by hot beverages. Cooking liquids accounted for 26% of all scald burns. Twenty-two percent (22%) were caused by hot tap water. Eight percent (8%) were caused by hot foods. Three percent (3%) were caused by cooking grease. Another 3% were caused by oil. A clothes iron, car, other cooking activities, domestic violence, a machine, steam and contact with an unspecified substance were each the source in 1% of the reported scald burn injuries in 2003. The improper opening of hot car radiators only caused 1% of these injuries. This is a continuation of the downward trend since 1998 that was interrupted in 2002.

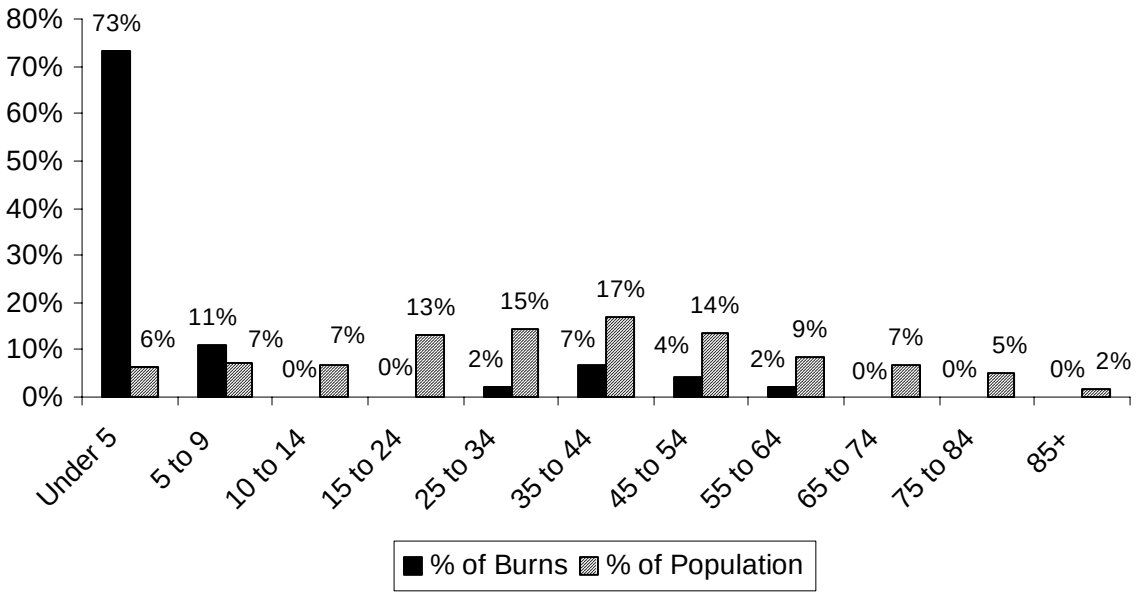


Hot Beverages

Hot Beverages Caused 30% of All Scalds
Forty-five (45), or 30%, of the 149 scald burns were caused by hot beverages. These 45 burns accounted for 11% of the 416 burn injuries reported in 2003. Except for 1999, hot beverages have been the leading cause of scald burns since the inception of M-BIRS in 1984.

Sixty-seven percent (67%) of the 45 hot beverage scald victims were male and 33% were female. In 2003 no one was reported to receive a hot beverage scald while working.

Hot Beverage Scalds by Age Group



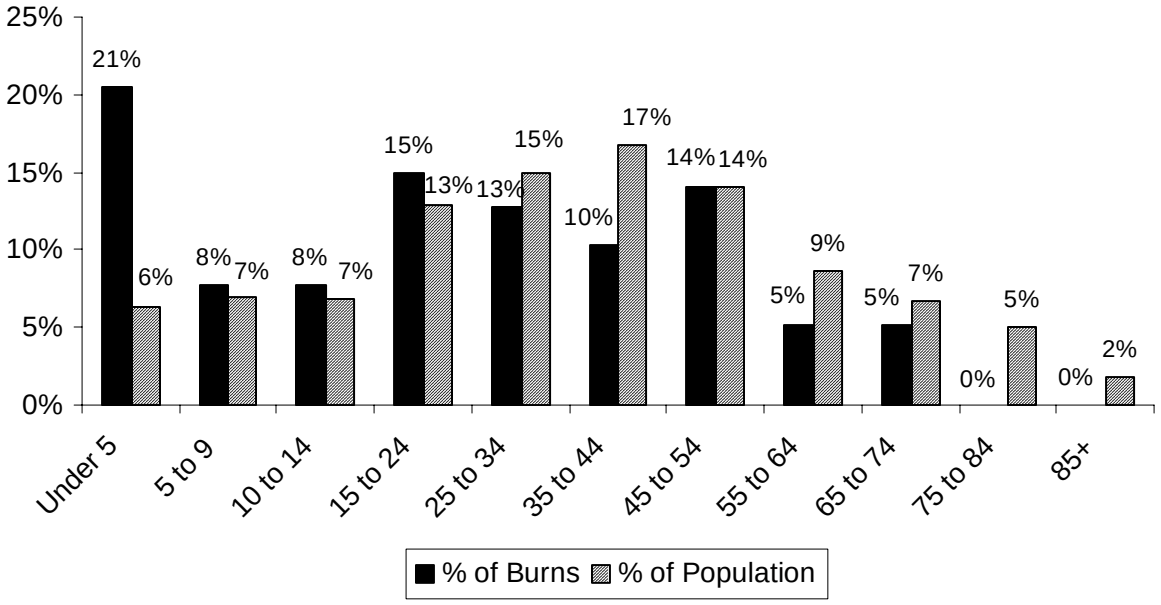
Almost 3/4 of the Hot Beverage Scald Victims Were Under 5
Seventy-three percent (73%) of the 45 hot beverage scald victims of known age were less than five years of age. Children under five years old were 12 times more likely to be scalded by a hot beverage. Twenty-six (26), or 58%, of the victims who were scalded were one-year old or younger. Another 13% were two or three-year old toddlers. In the previous year, 75% of the victims of hot beverage scalds were less than five years old.

Eleven percent (11%) of the hot beverage scald victims were between five and nine years old; no one between the ages of 10 and 24 received a scald burn from a hot beverage; 2% were between 25 and 34; 7% were between 35 and 44; 4% were between 45 and 54; 2% were between 55 and 64; no one over the age of 55 was reported to have received a scald burn from a hot beverage. Two one-month-old infants (one girl and one boy) were the youngest hot beverage scald burn victims, while the oldest person was a 55-year old woman.

Hot Cooking Liquids

Hot Cooking Liquids Caused 26% of Scalds, 9% of All Burns
Hot cooking liquids caused 39, or 26%, of the 149 scald burns and 9% of the 416 total burn injuries reported in 2003. Fifty-two percent (52%) of the victims were male and 48% were female. Hot cooking liquids scalded five people while they were at work, four men and one woman.

Hot Cooking Liquid Scalds by Age Group



Over 1/5 of Cooking Liquid Scald Victims Were Under the Age of 5

Those most likely to be under foot in the kitchen were most at risk to be burned by hot liquids on the stovetop. Twenty-one percent (21%) of the cooking liquid scald victims were under five years old. They were three and a half times more likely to be victims of a hot cooking liquid scald. Eight percent (8%) were between 5 and 9 years of age; another 8% of these injuries occurred within the age group between 10 and 14; members of the age group between 15 and 24 were in the second highest group of scalds caused by hot cooking liquids accounting for 15%; 13% were between 25 and 34; another 10% were between 35 and 44; 14% were between 45 and 54; 5% were between 55 and 64; another 5% were between 65 and 74; no one over the age of 71 received a scald burn injury from hot cooking liquids. The youngest hot cooking liquid scald burn victim was a six-month old boy, while the oldest person to have one of these burns was a 71-year old woman.

50-Year Old Man Burned in Domestic Dispute

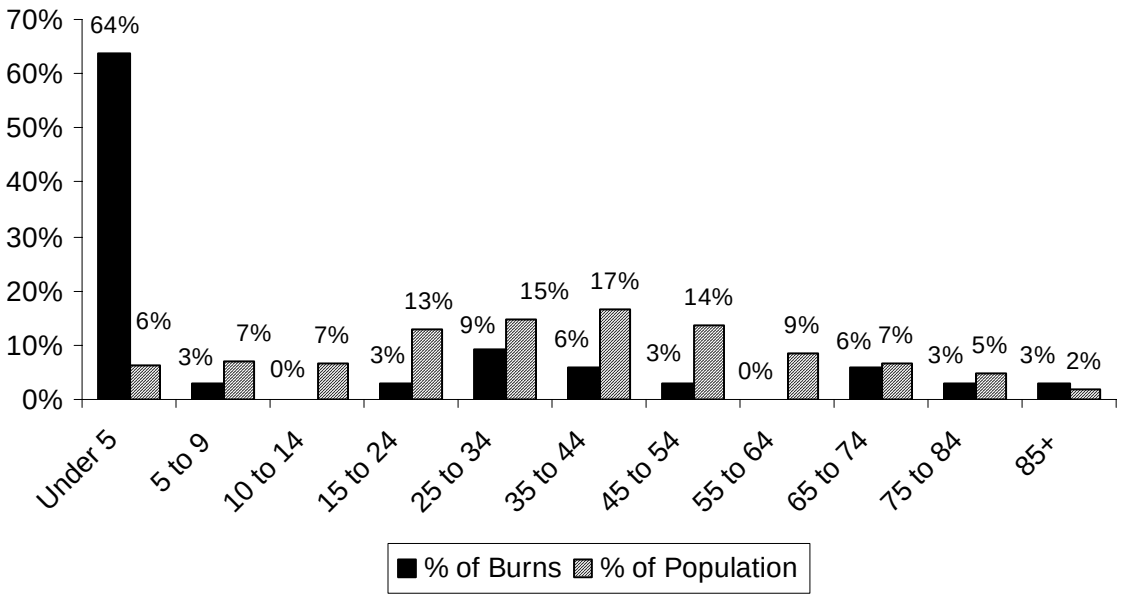
On November 21, 2003, a 50-year old Worcester man received burns to 22% of his body surface area during a domestic dispute. His spouse had poured hot cooking liquids over him while he lay in bed. He was hospitalized for a month while he recovered from his injuries.

Hot Tap Water

Hot Tap Water Caused Over 1/5 of All Scalds
Excessively hot tap water caused 33, or 22%, of the 149 scald burns and 8% of the 416 total burn injuries reported to M-BIRS in 2003. Hot water heaters should be set to temperatures of 125º Fahrenheit or less. Massachusetts law states that the temperature must be set between 110º and 130º F and most dishwashers have coils to boost their internal water temperature. It is important for homeowners to make sure their own water heaters are set in the appropriate range. At 155º F it takes only one second to sustain a third degree burn. At 130º F it takes thirty seconds. At 120º F it can take a full five minutes to sustain a third degree burn.[2] Adults may prepare a safe bath, but a child may turn on the hot water if left alone for a moment or two. Experts recommend placing a child in the tub facing away from the faucet.

Fifty-two percent (52%) of victims were male while the other 48% were female. Only one of the 33 victims, a 34-year old man, was scalded during work-related activities.

Hot Tap Water Scalds by Age Group



Almost 2/3 of Tap Water Scald Victims Were Under the Age of 5
Sixty-four percent (64%) of the 33 hot tap water scald victims of known age were less than five years old. Some were very young infants placed in water that was too hot for their sensitive skin. Other children were interested in exploring their environment and turned on faucets.

Three percent (3%) of the tap water victims were between the ages of five and nine; there were no hot water tap scalds for the age group between 10 and 14 years old; 3% were between 15 and 24 years of age; another 9% were between 25 and 34; 6% were between 35 and 44; 3% were

[2] Source: Knapp Burn Foundation

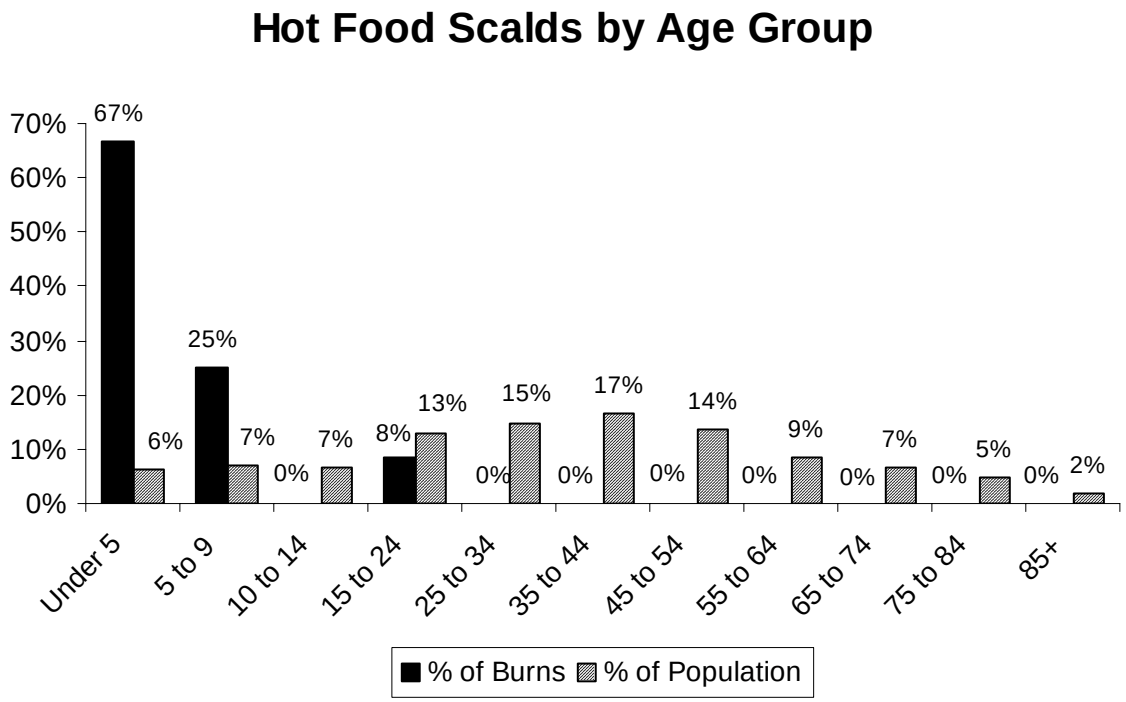
between 45 and 54; there were no reported hot tap scald burns between 55 and 64 years old; 6% were between 65 and 74; 3% were between 75 and 84; and 3% were over the age of 85. The youngest hot tap water scald burn victim was a four-month old girl, while the oldest person to have one of these burns was an 86-year old woman.

86-Year Old Woman Is Killed in Bathtub Accident
On December 30, 2003, an 86-year old woman was found unconscious in her bathtub with the water still running. She received burns to over 90% of her body surface area. She never recovered from her burns and later died in the hospital.

Hot Food

Hot food caused 8% of the 149 scald burns and just 3% of the 416 total burn injuries reported in 2003. Fifty-eight percent (58%) of the victims were male and 42% were female. Hot foods scalded one person, a 20-year old man while he was at work.

Over 2/3 of Hot Food Scald Victims Were Under 5
Of the 12 reported scald victims from hot food in 2003, over two-thirds, or 67%, were under five years old; 25% were between five and nine; and one victim was between 15 and 24 years old. There were no reported hot food scald burn injuries to anyone over the age of 20. The youngest hot food scald burn victim was a one-year old boy, while the oldest person to have one of these burns was a 20-year old man.



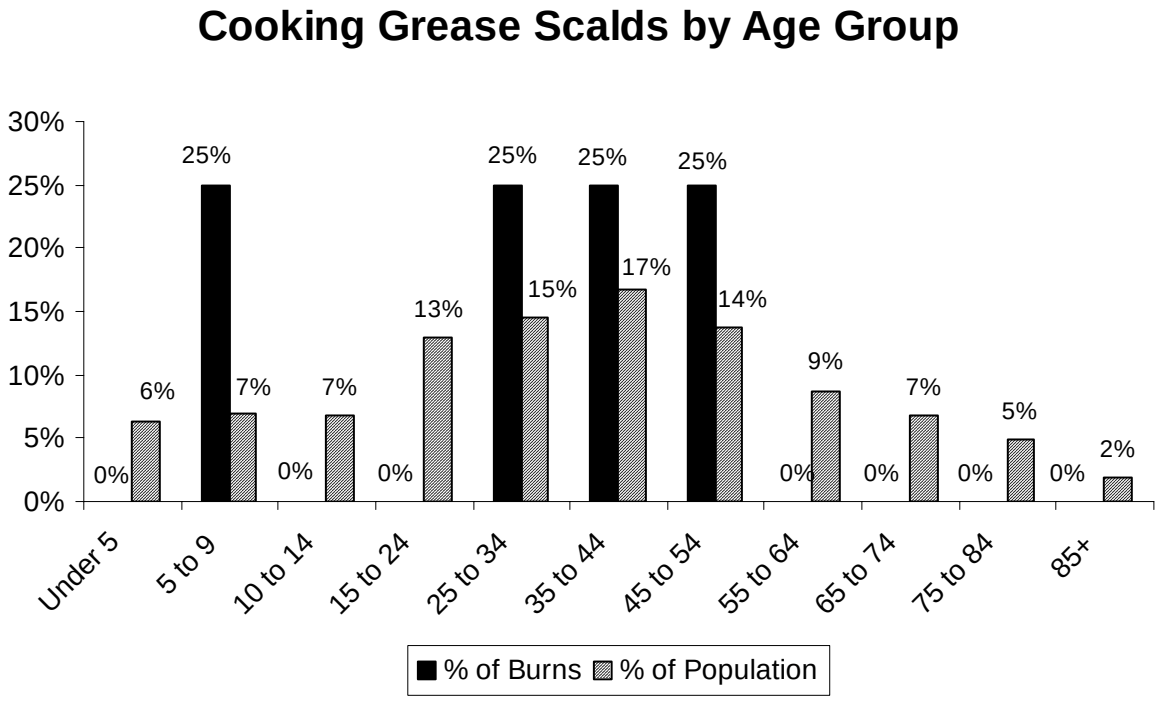
Cooking Grease

Cooking Grease Caused 3% of All Scalds, 1% of All Burns
Hot cooking grease caused four, or 8%, of the 149 scald burns and 1% of the 416 total burn injuries reported in 2003. Seventy-five percent (75%) of the four cooking grease scald victims were male and 25% were female. Cooking grease scalded one person, a 35-year old man, while he was at work.

Cooking Grease Scalded Adults Most Often
There were no scald burn injuries from cooking grease to children under five years old. This type of burn injury occurs predominantly to adults. One child (25%) between the age of five and nine received a cooking grease scald burn. No one between the ages of 10 and 24 received a scald burn from cooking grease in 2003. One victim, or 25% of these injuries, was between the ages of 25 and 34; another victim, or 25%, was between the ages of 35 and 44; and one victim, or 25% was between the ages of 45 and 54. There were no reported cooking grease scald burn injuries to anyone over the age of 54. The youngest cooking grease scald burn victim was a five-year old girl, while the oldest person to have one of these burns was a 54-year old man.

Safety Measures
Scalds from cooking grease combined with 13 cooking related flame burns makes the kitchen the place where burn injuries are most likely to take place. Since we must cook every day, we must learn to do so safely.

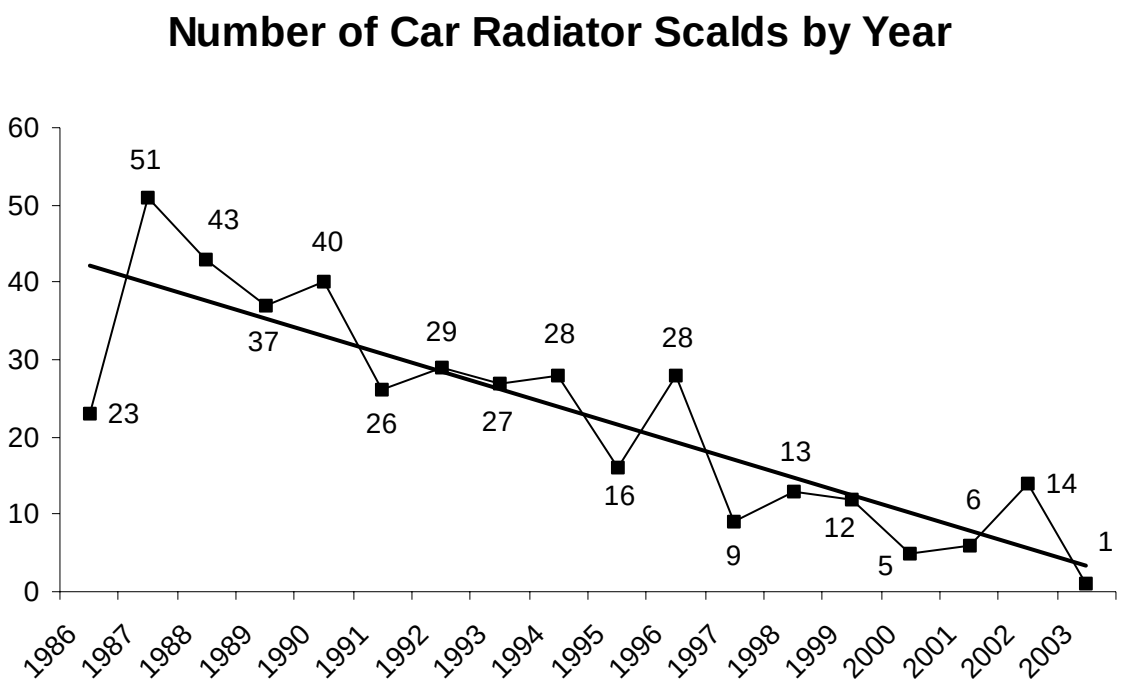
- ✓ Turn pot handles inward so children cannot pull them down.
- ✓ Never leave hot liquids or food unattended or at the edge of a table or counter to be pulled down by a toddler or a young child.
- ✓ Use mitts when carrying containers of hot liquid or food.



Car Radiators

Only 1 Reported Car Radiator Scald Burn In 2003

In 2003, there was only one reported scald burn injury caused by the improper opening of a hot car radiator. This lone car radiator burn victim was a 21-year old man that was injured in May of 2003. This one burn restores the declining trend in car radiator burns that started in 1987. As the chart below depicts, even though there have been some years where the number of reported car radiator burns has increased from one year to the next, only once has there been an increase two years in a row, from 2000 to 2001 and from 2001 to 2002. Overall the trend for the past 15 years has been one of decline. From 1987 to 2003 there was a 98% drop in reported car radiator scald burns. From 1992 to 2003 there was a 91% drop in reported car radiator scald burns.



Car Radiator Safety Measures

- ✓ When your car overheats, keep in mind that the contents of the radiator are under tremendous pressure. If you open it, the boiling liquid and steam can erupt and cause severe burns to your hands, arms and face. Wait at least a half hour for the car to cool down, and then use a rag to slowly open the cap, releasing the pressure as slowly as possible.

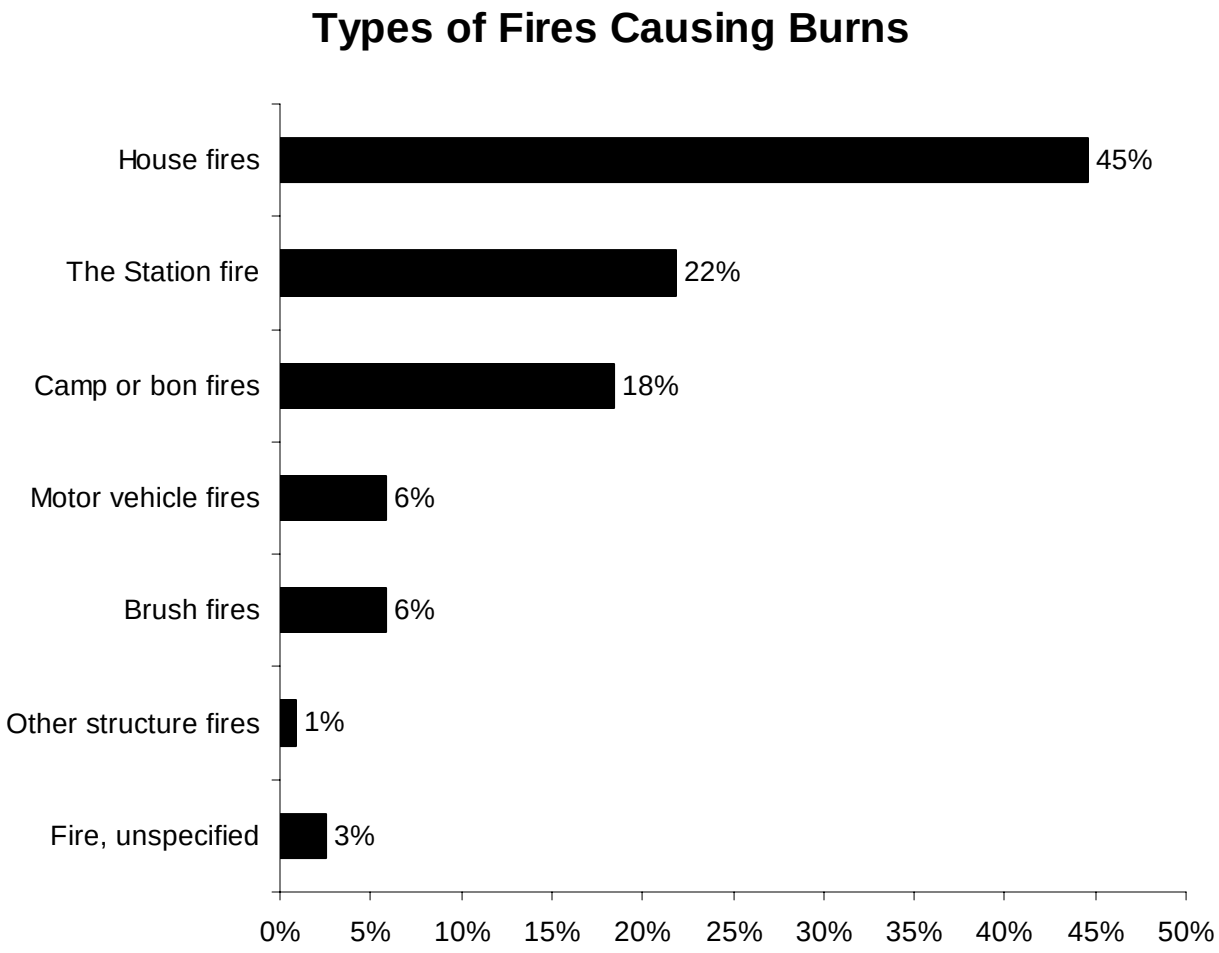
- ✓ The coolant in your overflow reservoir may also be extremely hot and may also be under pressure. Take the same precautions when opening the coolant reservoir that you would when taking off the radiator cap.

Burn Injuries Caused by Fires

Fires Caused 29% of Burn Injuries
One hundred and nineteen (119), or 29% of the 416 burn injuries reported in 2003 were caused by fires. This is a 75% increase over the 68 fire burns reported in 2002. Twenty-six (26) of these fire burn injuries were victims from the fire at The Station nightclub in West Warwick, Rhode Island on February 20, 2003. If we exclude these victims from our calculations there were 93 reported fire burn injuries accounting for a 37% increase in these types of burn injuries from the previous year.

Seventy-six percent (76%) of the 119 victims were male and 24% were female. Analysis of data from the Massachusetts Fire Incident Reporting System found that the majority of fire injuries occurred while the victim was attempting to control the fire and that men are more likely than women to attempt to control the fire and become injured.

45% of Fire Burn Injuries Occurred in People's Homes
Residential fires caused 53, or 45%, of the 119 fire burn injuries reported in 2003. Twenty-seven (27), or 23%, of the injuries occurred in non-residential structure fires; 26 of these 27 were victims of the tragic nightclub fire in Rhode Island. Twenty-two (22), or 18%, were caused by camp or bon fires; seven, or 6%, were due to motor vehicles fires; another seven, or 6%, of the victims received their burns in brush fires; and three, or 3%, of fire burn injuries occurred in unclassified fires, one was started by explosives, one by gasoline and one by cooking liquids.



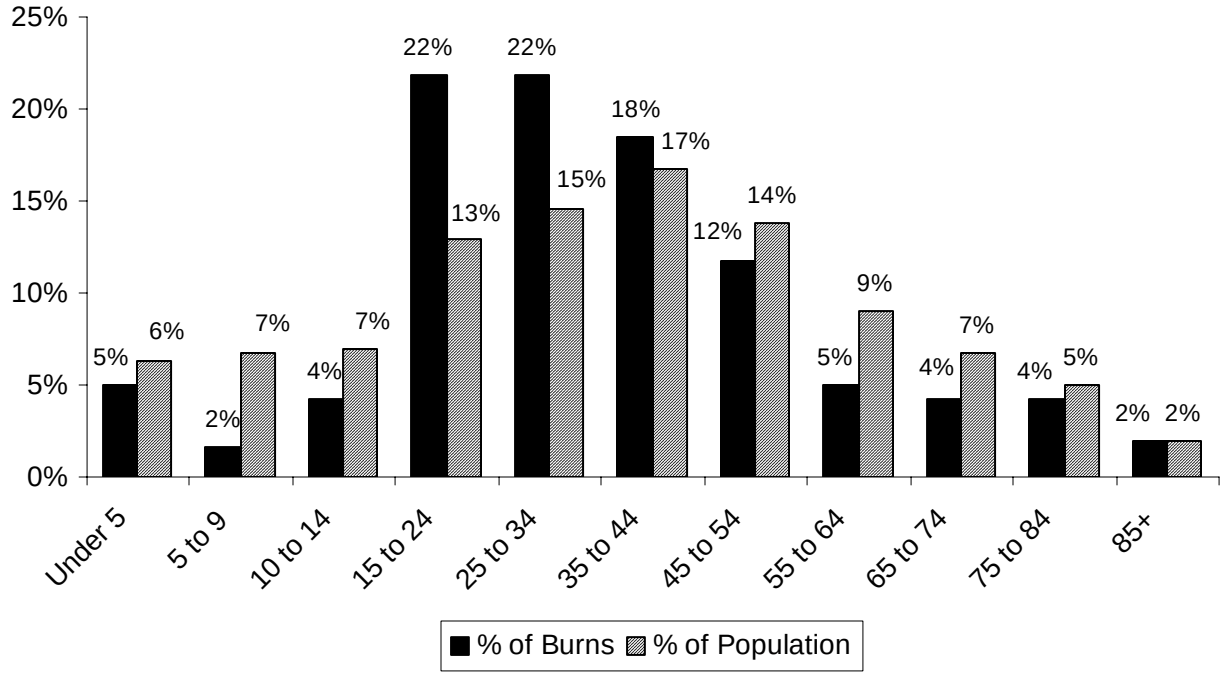
Young Adults Most Likely to Be Burned in Fires

Six, or 5%, of the victims burned in fire incidents were under five years old; two, or 2%, were between five and nine years of age; five, or 4%, were between 10 and 14; 26, or 22%, were between 15 and 24; another 26, or 22%, were between 25 and 34; 22, or 18%, were between 35 and 44; 14, or 12%, were between the ages of 45 and 54; six, or 5%, were aged between 55 and 64; five, or 4%, were aged between 65 and 74; another five, or 4%, were between 75 and 84; and two, or 2%, of fire burn injuries were over the age of 85.

26 Victims of Fire Burn Injuries Were From the Fire at The Station Nightclub

Twenty-six (26) of the 27 victims who received their burns from structure fires in 2003 were from The Station nightclub fire in West Warwick, RI on February 20, 2003. Seven (7) of these people were reported to have life-threatening burns, two others died. Sixty-five percent (65%) of the 26 victims were male and 35% were female. The youngest victim of this fire to be treated in Massachusetts was a 20-year old man while the oldest victim was a 43-year old woman. Massachusetts General Hospital treated 10 victims; Brigham & Women's treated eight patients; UMASS-Memorial University Campus treated four patients; Shriners (Boston) treated 4 patients; and St. Luke's in New Bedford treated one of the burn victims.

Fire Burn Injuries by Age Group



Reported Burns Are a Fraction of Injuries From Fires
Only burn injuries that extend to 5% or more of the body surface area and are treated by a medical professional are reported to the *Massachusetts Burn Injury Reporting System*. Consequently, the human cost of fires is under-reported in this analysis. Smoke inhalation, cuts, fractures and less severe burns incurred while fighting or fleeing the fire are not recorded here. Fire deaths are not recorded. Properly maintained smoke detectors and quick-response residential sprinklers could prevent many of the injuries caused by fires. Detectors should sound an early warning to leave the area and quick-response sprinklers can control or possibly extinguish a fire in its earliest stages.

Refer to MFIRS Annual Report for More Information about Fires
For more information about the causes of fires and fire-related casualties, please refer to the *Massachusetts Fire Incident Reporting System – Annual Reports*. Using data collected by the Massachusetts Fire Incident Reporting System (MFIRS), these reports examine the causes of fires, fire deaths and fire injuries. Information is provided on fires in different occupancies and on special topics such as children and fire, fires caused by smoking, electrical fires, cooking fires and heating equipment fires.

Arsonist Dies in His Own Fire
On May 18, 2003, a 36-year old Springfield man received second and third-degree burns to his entire body while he was setting fire to his single-family home. He had poured gasoline all around the living room and ignited it. Firefighters found him outside the home that was fully

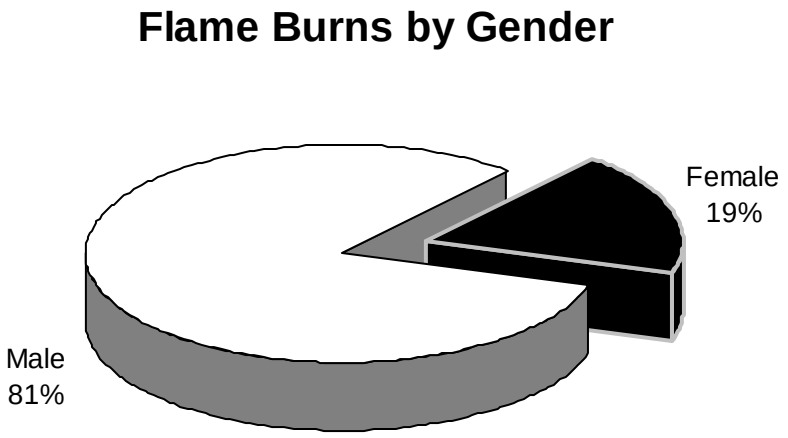
engulfed upon their arrival. The victim was brought to Bay State Medical Center and then transported to Brigham & Women's Hospital in Boston where he died from his injuries on 5/23/03.

17-Year Old Man Severely Injured in Bonfire
On July 6, 2003, a 17-year old Kingston man received burns to 60% of his body when he fell into a bonfire somewhere in the woods around Kingston. The teen and his friends had started the bonfire with gasoline.

Flame Burn Injuries

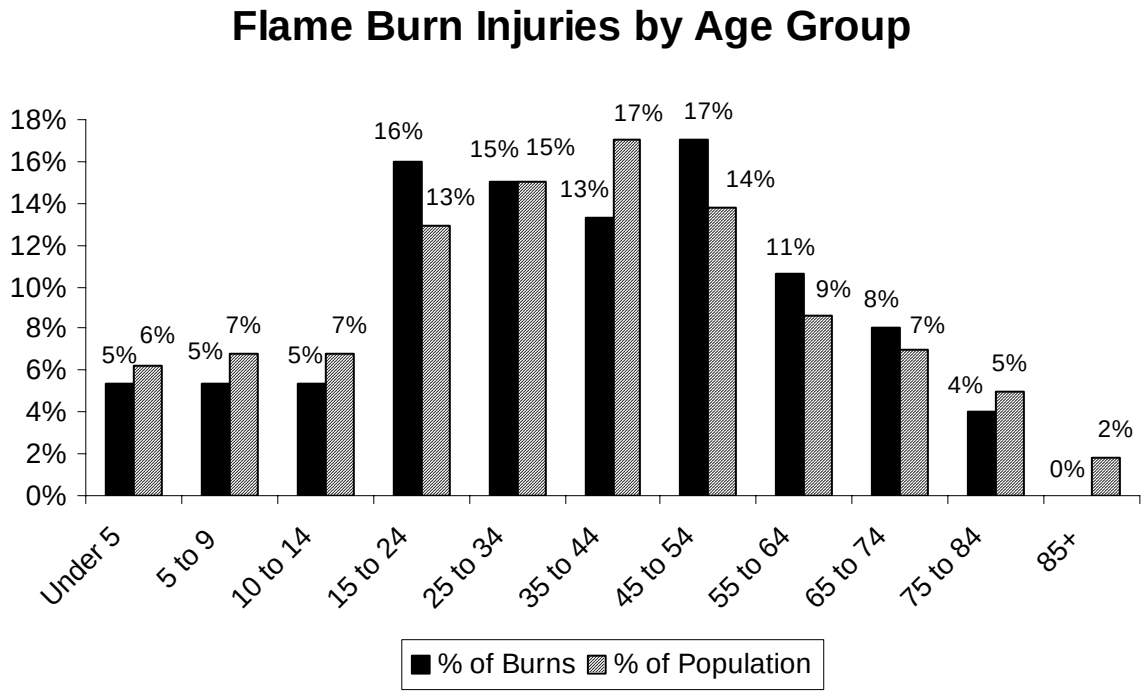
Flames Caused 18% of Reported Burn Injuries
Seventy-five (75), or 18%, of the 416 burn injuries reported in 2003 were considered flame burn injuries. A burn is said to result from flame when the fire is confined to the victim or the victim's clothing. When a wider area burns, the cause of the injury is considered a fire. Burns caused by self-immolation, smoking in bed or burning clothing usually result from flames.

Eighty-one percent (81%) of the flame burn casualties were male and 19% were female. Nine, or 12% of the 75 flame burns, occurred during work-related activities; and all nine were male.



Young Adults 15-24 & Adults 45-54 Faced Disproportionate Risk of Flame Burns
Two groups were at a higher risk for burns from flames. Young adults between the ages of 15 and 24 and adults between the ages of 45 and 54, were all 1.2 times as likely to be burned. Five percent (5%) of the 75 flame burn victims were children under the age of five; another 5% were between the ages of five and nine; 5% were between 10 and 14; 16% were victims with ages 15

to 24; 15% were between 25 and 34; 13% were between 35 and 44; 17% were between 45 and 54; 11% were between 55 and 64; 8% were between 65 and 74; 4% were between 75 and 84. There were no flame burn injuries reported to anyone over the age of 80. The youngest person to receive a flame burn injury was a one-year old girl, while the oldest was an 80-year old woman.



Ignitable Liquids Were the Leading Cause of Flame Burn Injuries
Ignitable liquids were the leading cause of flame burn injuries in 2002. They accounted for 18, or 24%, of flame burn injuries. Gasoline caused 10, or 13%, of the flame burns. Six (6), or 60%, of these 10 gasoline flame burn injuries were to children. The other eight, or 11%, of these injuries were caused by various other types of ignitable liquids.

Cooking Involved In Over 1/5 of All Flame Burns
Cooking was involved in 16, or 21%, of all flame burns in 2003. Seven, or 9%, of the flame burns involved clothing ignitions while cooking. Four (4), or 1% of the victims, received their injuries by coming into contact with a hot stove. Three (3), or 1% of the victims, received their flame burn injuries from ignitions of hot cooking liquids. Two (2), or less than 1%, of the victims were burned while barbequing.

There were 14 clothing ignitions resulting in flame burn injuries accounting for 19% of all flame burn injuries. Sixty-four percent (64%) of the burn victims whose clothing ignited while cooking were male and 36% were female. Half of these victims were 55 years old or older.

Smoking Caused 1/5 of Flame Burns
Smoking accounted for 13, or 17%, of all flame burn injuries in 2003. Three (3) of these injuries, accounting for 4% of the total injuries in this category, were due to clothing ignitions while

smoking. The three victims of these clothing ignitions were a 37-year old man, a 64-year old man and a 66-year old man. Another three flame burns, or 4%, were from smoking while in bed. Five were ignitions from a cigarette lighter accounting for 7%; three of these five were from children's clothing ignitions while playing with a cigarette lighter. One victim received a burn injury when a match ignited his clothes, accounting for 1% of the burns. Another victim received a flame burn injury from an unspecified smoking action.

Welding was the cause of another five, or 8%, of 2003 flame burn injuries. Self-immolation resulted in four, or 5%, of the flame burn injuries. Heaters caused four, or 5%, of these injuries. Two people were injured by portable heaters, one victim by an unspecified heater and another victim received their flame burn injury from a wood stove.

Assaults accounted for three, or 4%, of these burns. Explosives, caused another three, or 4% of flame burns. Two of these injuries were caused by fireworks and the other injury by professional explosives.

Propane contributed to two, or 3%, of the flame burn injuries in 2003. Candles also contributed to two or another 3% of flame burn injuries. One victim had her clothes ignite from a candle and the other person was burned by the candle itself.

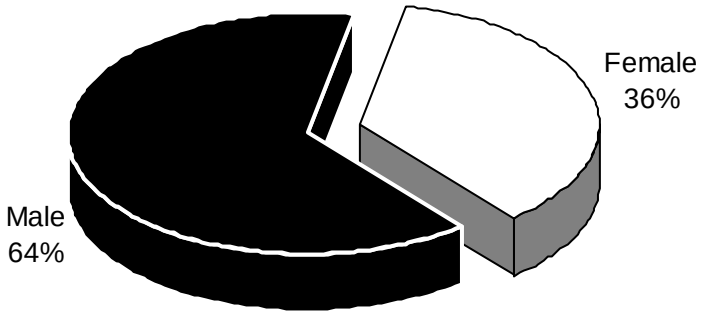
Spilled alcohol, illegal drugs, flammable materials, a medical condition (seizure) which caused the victim to fall into a fire, and some hot metal each accounted for one, or 1%, of the flame burn injuries.

Clothing Ignitions Account for Almost 1/5 of Flame Burn Injuries

Fourteen, or 19%, of the flame burns injuries in 2003 involved clothing ignitions. Clothing ignitions while cooking were the cause of seven, or 9%, of these injuries. Clothing ignitions from smoking were responsible for three, or 4%, of the burns. Two children (3%) had their clothes ignite when they were playing with lighters. One victim, or 1% of the flame burn injuries, received her burn when a candle ignited her clothes. A 64-year old woman accidentally ignited her clothes with a match.

As the following graph shows, nine, or 64%, of the victims of clothing ignitions were male and five, or 36%, were female.

Clothing Ignitions by Gender



Almost 1/3 of All Flame Burn Injury Victims Due to Clothing Ignitions Were Over 65
Four (4), or 29% of all the victims of flame burn injuries due to clothing ignitions were over 65-years old. Two (2) children under the age of five incurred this type of flame burn injury accounting for 14% of flame burn injuries caused by clothing ignitions. Children between the ages of five and nine accounted for another two, or 14%, of these injuries. There was one victim in each age group, 25 to 34, 35 to 44 and 45 to 54, each accounting for 7% of the clothing ignition flame burn injuries in 2003. Another three victims, or 21%, of flame burn injuries due to clothing ignitions were between 55 and 64 years old. The youngest person to receive a flame burn injury from a clothing ignition was a three-year old boy whose clothes were ignited when he was playing with a lighter; and the oldest victim from a clothing ignition flame burn injury was an 80-year old woman who received her injuries while cooking. No one between the ages of 10 and 24 or over the age of 80 received a flame burn due to clothing ignition.

64-Year Old Woman Dies From Match
On March 15, 2003, a 64-year old Hull woman accidentally dropped a match onto her clothes and received burns to her arms, legs and chest. Approximately 20% of her body surface area was burned. She was med-flighted to Brigham and Women's Hospital for immediate treatment where she unfortunately died two weeks later.

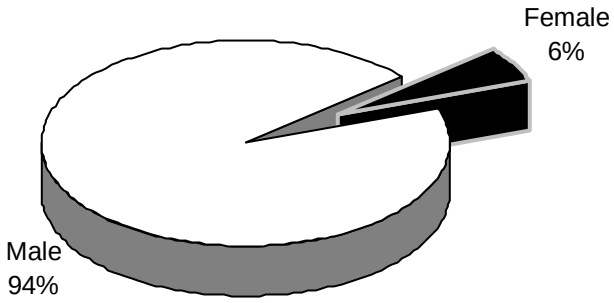
74-Year Old Woman Dies From Cigarette Lighter
On February 16, 2003, the cigarette lighter a 74-year old Somerville woman was using exploded, setting her on fire. She received burns to 85% of her body. She was brought to Massachusetts General Hospital for treatment where she unfortunately died a few days after the accident.

18-Year Old Man Burned When Using Fireworks
On July 8, 2003, an 18-year old Brockton man was injured when a firecracker ignited gasoline that had soaked into his shirt. He received burns to 24% of his body surface area.

Burn Injuries Caused by Explosions

Explosions Caused 9% of Reported Burn Injuries
Thirty-six (36), or 9%, of the 416 burn injuries reported in 2003 were caused by explosions. Ninety-four percent (94%) of the explosion burn victims were male and 6% were female.

Explosion Burn Injuries by Gender

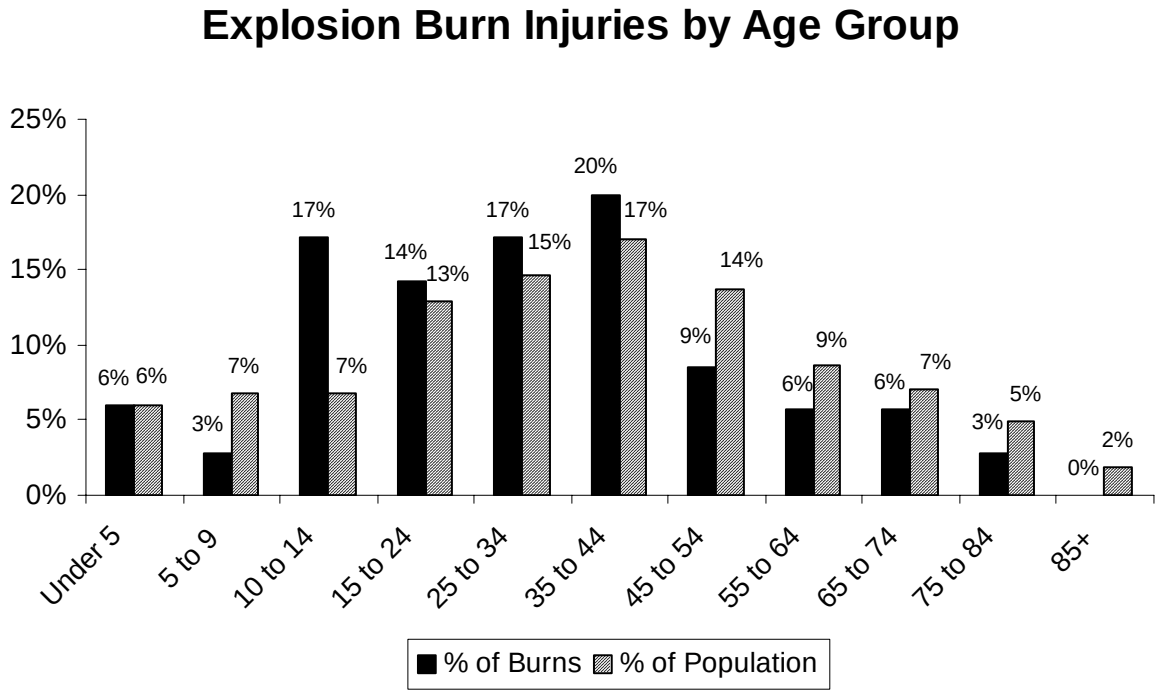


Fifteen (15) burns, or 50%, occurred during work-related activities. All of these victims were male. This is a continuation of the trend where 12, or 40% of explosions in 2002 were work-related, 14, or 38%, were work-related in 2001, in 1999, nine, or 41%, were work-related, and in 1998, seven, or 26% of the burn injuries caused by explosions were work-related. In 2000 only two burns, or 7%, of the burns caused by explosions were work-related.

Out of these 36 injuries there were five explosions with two injuries each. All of these victims were men. Two men were seriously injured in an explosion while working in a storage trailer that was used for fish storage in New Bedford. A cigarette caused an explosion on Deer Island that injured two workers. An accident with a cutting torch caused an explosion that injured two workers in Charlestown. Two more workers were injured in Milford when flammable materials exploded. Two Wellesley teenagers were injured when the aerosol can that they were playing with exploded near them.

Children Ages 10 to 14 Face Greatest Risk of Explosion Burns
Children under five years old accounted for two, or 6% of the explosion burns in 2003; one, or 3%, was a child between the ages of five and nine; children between the ages of 10 to 14 accounted for six, or 17%, of these injuries; five, or 14%, were between the ages of 15 to 24; adults between the ages of 25 and 34 received six, or 17%, of the explosion related burns; eight,

or 20%, were between 35 and 44, becoming the age group with the most explosion burn injuries in 2003; three, or 9%, were between 45 and 54 years of age; two, or 6%, were between 55 and 64 years old; another two, or 6%, were between 65 to 74 years old. There was one victim between 75 and 84 years old, accounting for 2% of the explosion burns. No one over the age of 75 received a burn injury due to an explosion.



Propane Was the Leading Cause of Explosion Burn Injuries
Propane was the leading cause of explosion injuries and caused five, or 14%, of them. Flammable materials were also responsible for five, or 14%, of these injuries. Smoking caused another five, or 14% of explosion burn injuries; two explosion-related burns were caused by cigarettes, two by smoking while someone was using oxygen and one injury from an unspecified smoking act. Ignitable liquids accounted for four, or 11%, including one where a child was playing with gasoline. Cooking caused three, or 8%; two were from cooking liquids and the other injury was from a gas barbeque. Car parts, chemicals, aerosol cans, cigarettes, torches, each accounted for two, 6%, of the explosion burn injuries in the Commonwealth. Alcohol, arson, a car radiator, an unspecified electrical problem, a hot piece of metal, and a motorcycle each accounted for one, or 3%, of the explosion-related burn injuries.

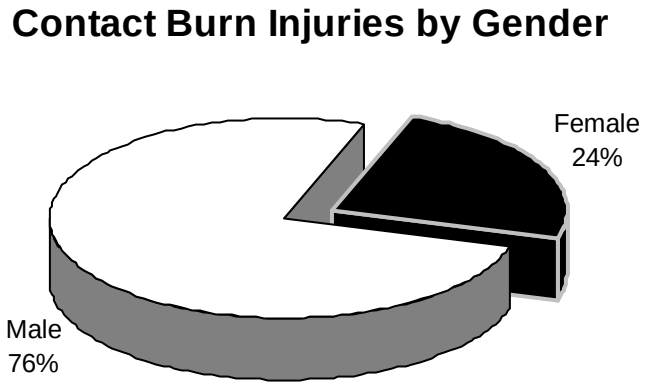
In 2003 there were two burn injuries from fireworks, but both of these were flame burn injuries. Just as in 2001, there were no explosion-related burn injuries from fireworks.

71-Year Old Man Dies From Smoking on Home Oxygen
On June 24, 2003, a 71-year old man who was smoking while using home oxygen died from severe burns sustained when his clothes ignited. His wife and daughter tried to extinguish the victim, and both received burns to their hands. The victim was burned over 70% of his body.

19-Year Old Man Injured in Motorcycle Explosion
On June 14, 2003, a 19-year old New Bedford man was at St. John's Cemetary in Dartmouth. His motorcyle's gas tank somehow exploded and he received life-threatening burns to over 80% of his body.

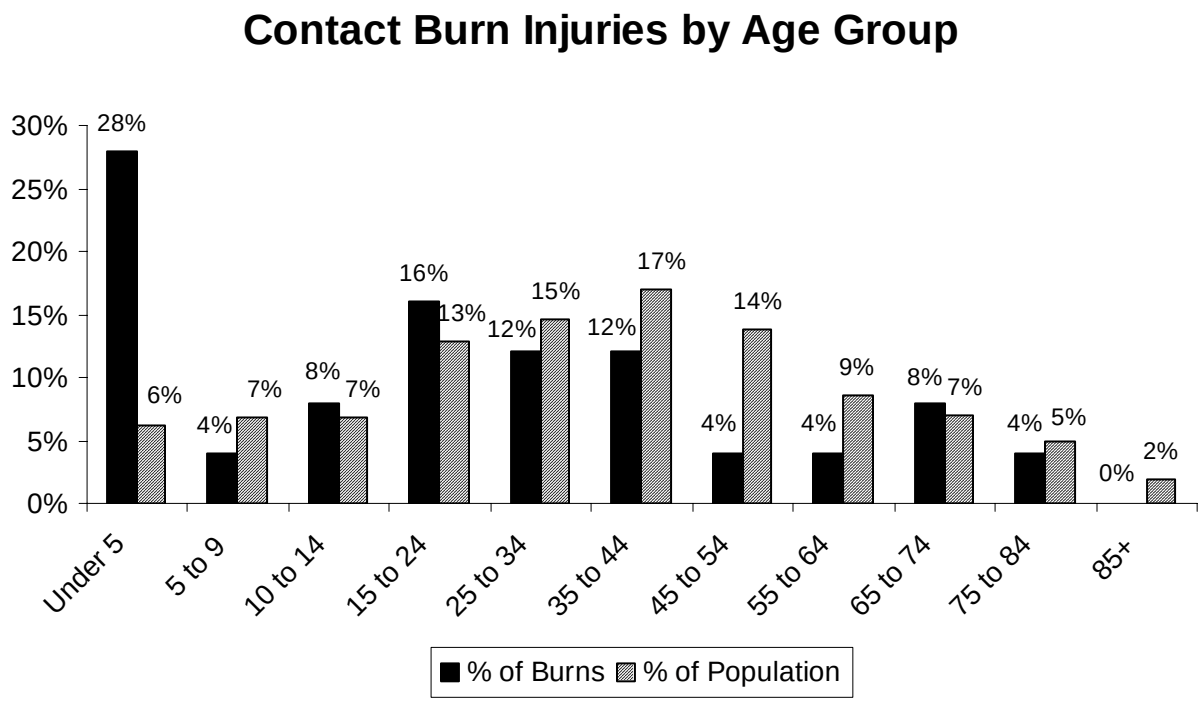
Contact Burn Injuries

Contact with Hot Objects Caused 6% of Reported Burn Injuries
Twenty-five (25), or 6%, of the 416 burn injuries reported in 2003 were caused by contact with hot objects. Seventy-six percent (76%) of the burn victims were male and 24% were female. Four, or 16%, of contact burns occurred at work in 2003.



28% of Contact Burns Were to Children Under 5
Over one-quarter of all the 26 contact burns reported in 2003 were to children under the age of five. This age group accounted for seven, or 28%, of all contact burns. Pre-schoolers faced 4.7 times the risk of contact burns or were nearly five times as likely to receive a contact burn. This disproportionate risk could be the result of young children exploring their environment and underscores the need for constant supervision of toddlers. One, or 4%, of these burn victims was between the ages of 5 and 9; two adolescents in the age group between 10 and 14 received a contact burn injury accounting for 8%; four, or 16%, were between 15 and 24; 12%, or three victims, were between 25 and 34; the age group 35 to 44 also accounted for three victims, or 12%; one victim was in the age group 45 to 54, and accounted for 8% of these injuries; another victim in the age grouping 55 to 64, also accounted for only 4% of the burn injuries from contact with hot objects; two, or 8%, were between 65 and 74; and one victim belonged to the age group 75 to 84 years of age. In 2003, no one over the age of 78 received a burn from contact with a hot

object. The youngest person to receive a contact burn in 2003 was a one-month old boy, and the oldest person was a 78-year old man.



Cooking Is the Leading Cause of Contact Burns

Cooking caused five, or 20%, of the 26 reported contact burns in 2003. Contact with a stove or oven caused four of these burns, and an unspecified cooking activity caused one. Hot wax caused three, or 12%, of the contact burns. Hot asphalt, heaters, unidentified machines, and radiators were each the culprits in two, or 8%, of contact burns. A candle, a car part, a chemical, a clothes iron, a motorcycle, a hot pipe, a portable heater and a woodstove each caused one, or 4% of the contact burns in 2003. There were four work-related contact burn injuries in Massachusetts in 2003. All four of these work-related injuries were male.

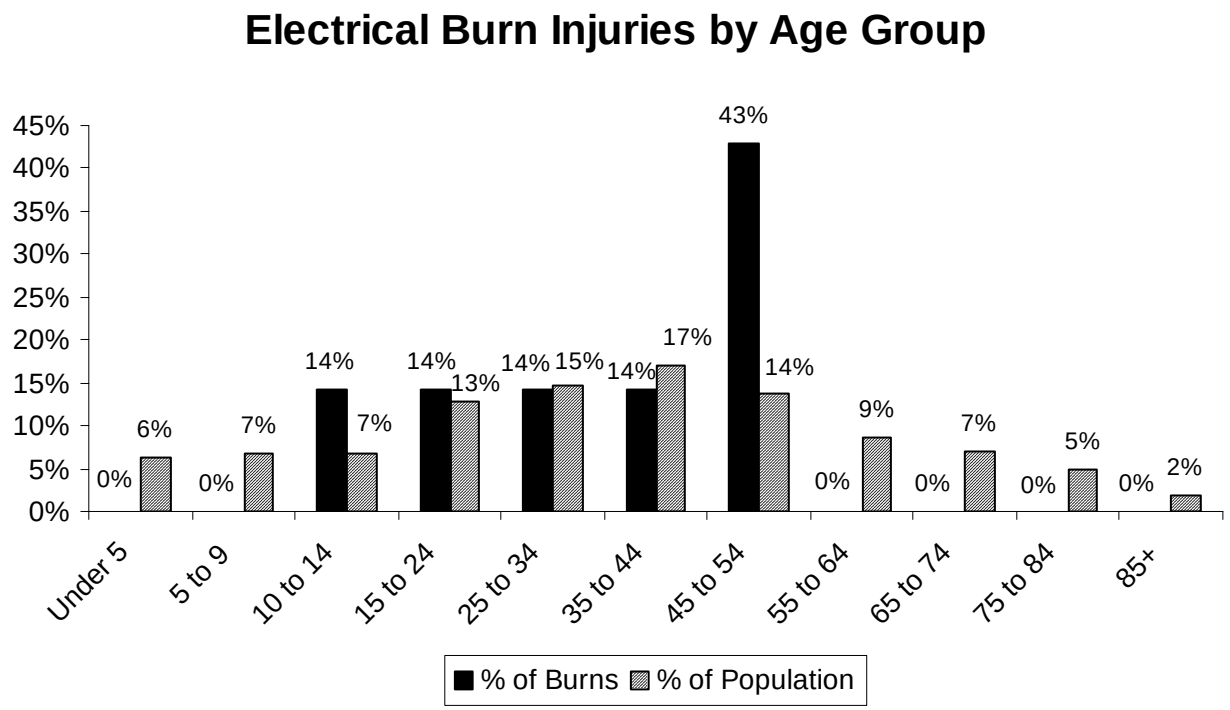
17-Year Old Falls onto Hot Asphalt

On August 15, 2003, a 17-year old Boston man rode his scooter through some posted roadblocks onto a newly paved portion of a road. The victim lost control of his scooter and fell off onto the recently applied hot asphalt. He received burns to his back, hands and shoulders, or approximately 25% of his body surface area.

Electrical Burn Injuries

Electrical Incidents Caused 2% of Burn Injuries
Seven (7), or 2%, of the 416 burn injuries reported in 2003 were caused by electrical accidents. All of the electrical burn victims were male. Five of these incidents occurred during work-related activities, all of these victims were men.

All Electrical Burn Victims Were Between the Ages of 10 and 53
No one under the age of 10 and no one over the age of 53 received a burn from an electrical source. One (1), or 14% of the victims, who received electrical burns, was between 10 and 14; one of the victims, or 14%, were between 15 and 24; another victim, or 14%, was between 25 and 34; and still another victim, or 14% was between the ages of 35 and 44 years old. People aged 45 to 54 received three, or 43%, of the reported electrical burns, they were three times more likely to be an electrical burn victim.



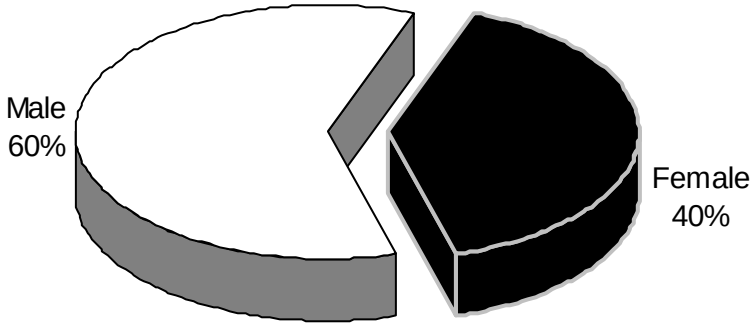
Over 1/2 of Electrical Burns Were Caused by Undefined Electrical Accidents
Four (4), or 57%, of the electrical burn injuries in 2003 were from undefined electrical accidents. Electrocutions accounted for three, or 43%, of electrical burns.

30-Year Old Man Receives Work-Related Electrical Burns
One March 14, 2003, a 30-year old Milford man received an electrical shock while working. This shock caused electrical burns to his right arm and to the upper right side of his back. Approximately 9% of the victim's body surface area was burned.

Other Types of Burn Injuries

Chemical Exposures & Sunburns Cause *Other* Burns
In 2003 there were five burn injuries that were characterized as *Other*. These include three (3) burns, or 60%, caused by exposure to chemicals. One of these chemical burns was caused during the attempted making of a bomb. The two *Other* burns, or 40%, were attributed to severe sunburns. Sixty percent (60%) of the five victims were male and 40% were female. Health care facilities reported that one, or 20%, of the five *Other* burn victims were working when injured. An exposure to a chemical is how this person received his burn injury.

Other Burn Injuries by Gender



60% of *Other* Burn Victims Were Between 25 to 44 Years Old
None of the *Other* burn victims were under ten years old. One victim was between the ages of 10 and 14, accounting for 20% of these burn injuries; another victim accounting for 20%, was between 15 and 24. One (1) victim, or 20%, was between the ages of 25 and 34; two, or 40%, were between 35 and 44. No one over the age of 43 suffered an *Other* burn injury. The youngest victim was a 12-year old boy and the oldest victim was a 43-year old man.

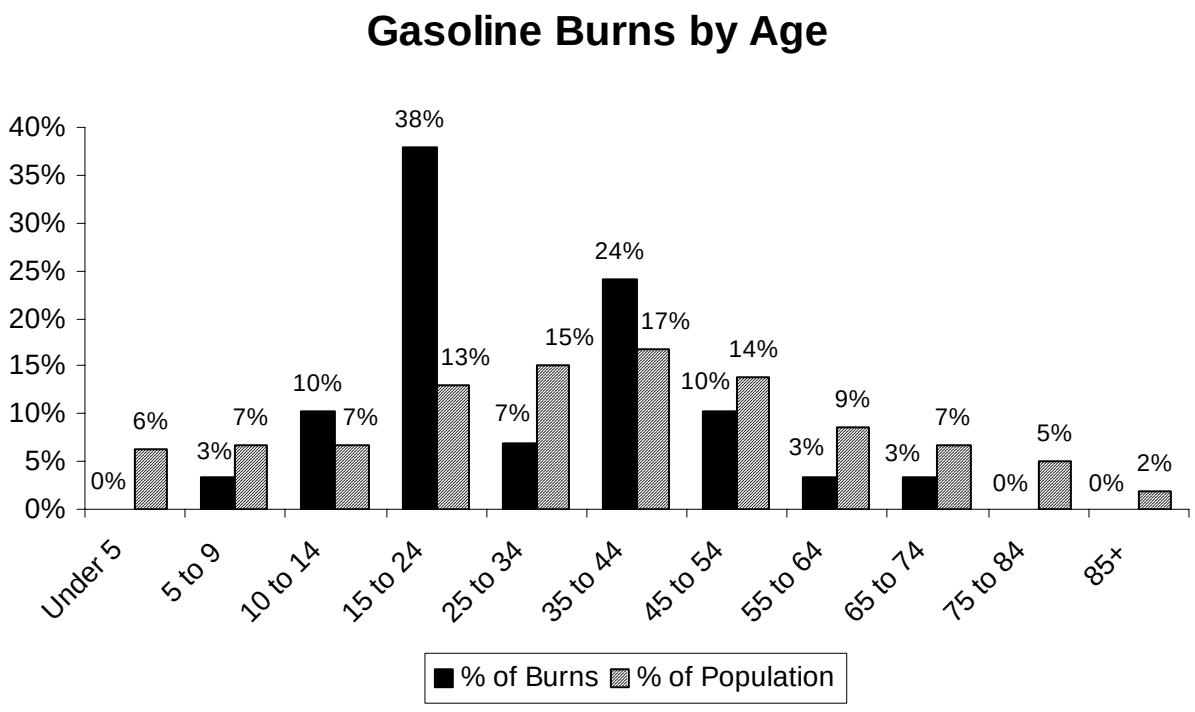
Man Working Burned By Chemicals
On February 10, 2003 a 43-year old Tewksbury man was at work at Kraft Foods in Woburn. A chemical fire within the plant burned the victim. Chemical burns covered 25 - 30% of his body surface area.

16-Year Old Injured Making a Bomb
On August 30, 2003, a 16-year old Blackstone male teenager was mixing drain cleaner, water and other materials in an attempt to make a bomb. An accident ensued and he received first and second degree chemical burns to his head, neck, shoulder and arm.

Gasoline Related Burn Injuries

Gasoline Involved in 7% of Reported Burn Injuries
Gasoline was involved in 29, or 7%, of the 416 burns reported to M-BIRS in 2003. Eighteen (18), or 62%, of the gasoline related burn injuries were caused by fires. Ten (10), or 34%, of the burn injuries involving gasoline were flame burn injuries. One (1), or 3%, was the result of an explosion when a child was playing with gasoline. Twenty-six (26), or 90%, of the 29 gasoline related burn victims in 2001 were men, three, or 10% were women. Only one of the incidents occurred during work-related activities, accounting for 3% of all gasoline related burn injuries.

Over 1/2 of Gasoline-Related Burn Victims Were Between the Ages of 10 and 24
There were no victims under the age of five. One victim, or 3%, was between 5 and 9 years of age. Three (3), or 10%, of the victims were between the ages of 10 and 14 years old. This age group has historically been the most at risk for these types of injuries, but this year this age group is only at a slightly elevated risk of gasoline burn injuries. Eleven (11), or 38%, of the victims were between 15 and 24; young adults in this age group were three times more likely to be burned while handling gasoline. Two (2), or 7%, were between 25 and 34; seven, or 24% were between 35 and 44; three, or 9%, were between the ages of 45 and 54; one, or 3% was between the ages of 55 and 64, while the last victim was in the age group 65 to 74. No one over the age of 71 was the victim of one of these burns. The youngest victim was a nine-year old boy and the oldest victim was 71-year old man.



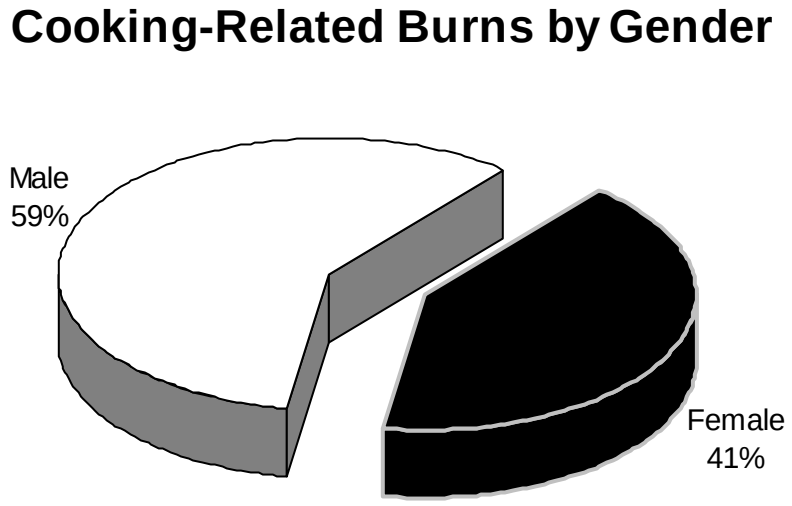
It is actually gasoline vapors that burn, not the liquid itself. The vapors are generated at very low temperatures, are heavier than air and can travel a distance to find a spark. A spark or lit cigarette is enough to ignite the invisible fumes that may linger on clothing. Gasoline is a tool, but a dangerous one, and it demands respect.

Gas Fumes Ignite while Refueling Boat
On August 16, 2003, while refueling a boat at the Onset Marina, gas fumes ignited causing the boat to catch fire. A 52-year old woman that was on the boat received burns to approximately 75% of her body. She was transported to Brigham and Women's Hospital for treatment.

Some Safety Measures
- If you must store gasoline, store it outside the home in approved safety cans away from open flames (i.e. water heaters and pilot lights) and out of reach of children.
- Never regularly carry gasoline in your trunk.
- A one-gallon approved container could be carried empty to be used only for emergencies.

Burns Caused by Cooking Activities

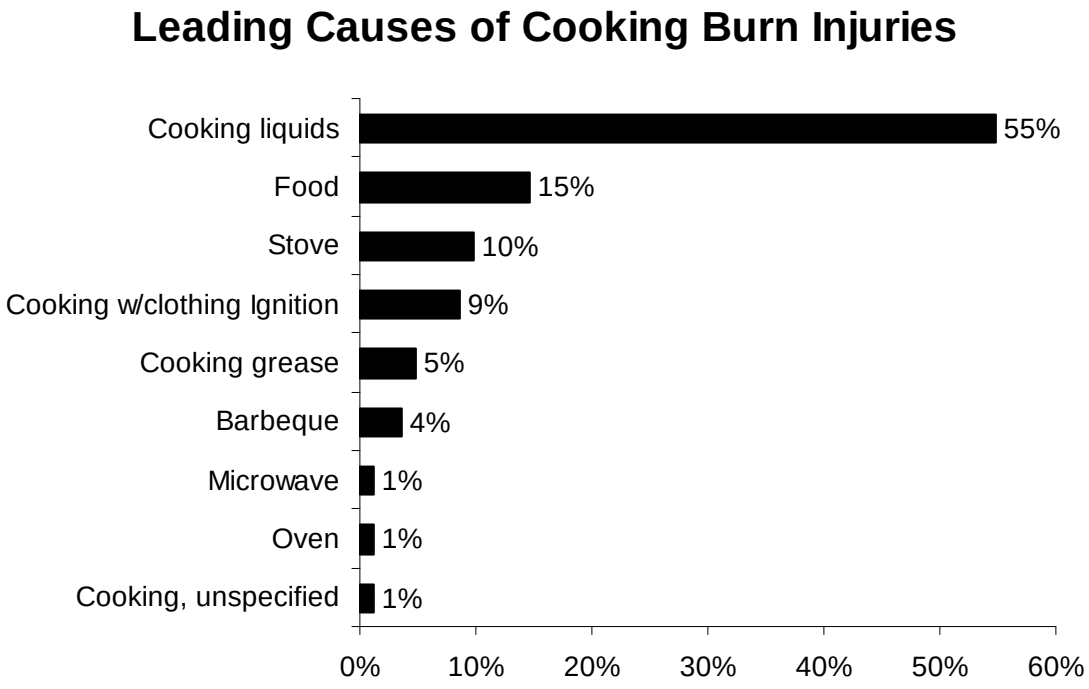
Cooking Activities Caused 1/5 of Reported Burn Injuries
Cooking activities caused 82, or 20%, of the 416 burn injuries reported to the Massachusetts Burn Injury Reporting System in 2003. Forty-eight, or 59%, of the 82 victims were male and the other 34, or 41%, were female. Twelve (12), or 15%, of the 82 people burned by cooking activities were working when injured.



Fifty-six (56), or 68%, of the 82 burn injuries caused by cooking were scalds. Thirty-nine (39), or 48%, of these scald victims were injured by hot cooking liquids; hot food accounted for 12, or 21%; cooking grease scalds accounted for four, or 7%; and unspecified cooking practices accounted for one, or 2%, of these victims. Seven, or 10% of the victims, were burned when their clothing ignited while cooking; a total of 16, or 23% of cooking-related, burns were flame burns. Five victims received their burns from coming into contact with hot stoves, or other cooking equipment, causing 7% of these burns. Three (3) victims received burn injuries in cooking-related explosions, accounting for 4% of cooking burn injuries in 2003. Two (2) house fires caused by cooking injured two people accounting for 3% of the cooking-related burn victims.

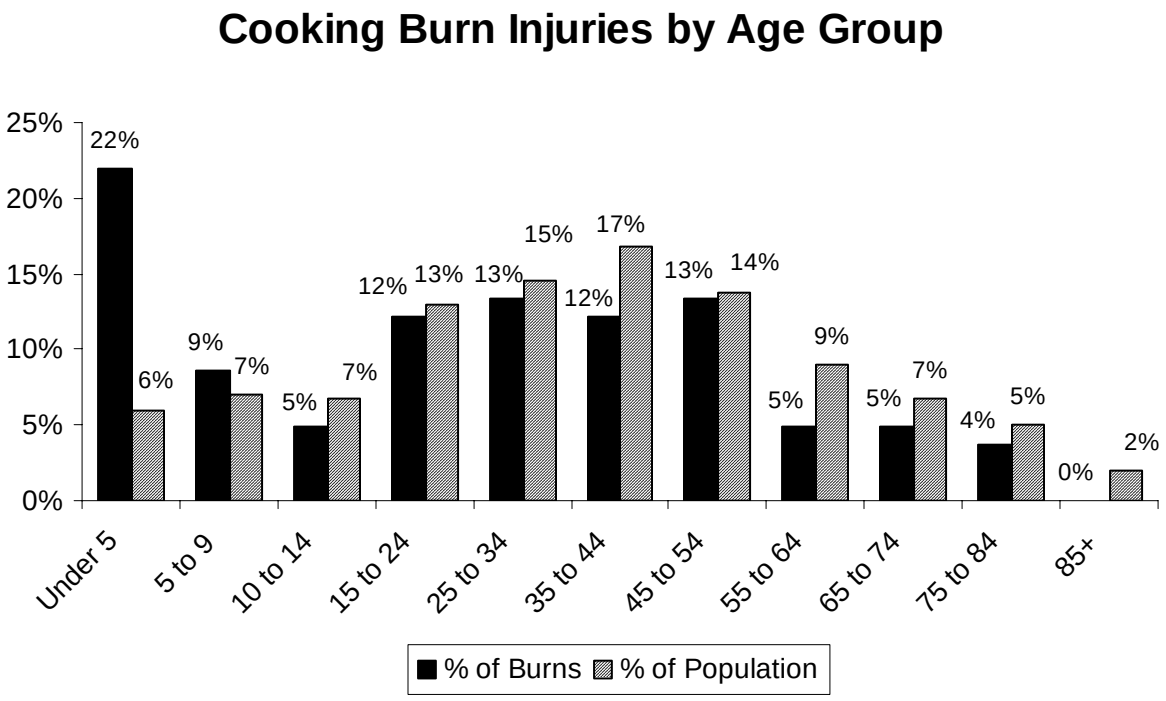
Cooking Liquids Were the Leading Cause Cooking-Related Burns
Burns from cooking liquids were the leading cause of all cooking-related burns in Massachusetts in 2003. These burns accounted for 45, or 55%, of all cooking-related burn injuries. Scalds from hot food were the second leading cause of cooking-related injuries. They caused 12, or 15%, of these injuries. Flame burn injuries from stoves and burns from coming into contact with a hot stove were the third leading cause of cooking burns in 2003 accounting for eight, or 10%, of these injuries. Clothing ignitions while cooking caused seven, or 9%. Hot cooking grease was responsible for four, or 5%, of these injuries. Burns received while barbequing accounted for three, or 4%, of all cooking burn injuries. A burn from a microwave oven, a conventional oven and an unspecified cooking activity each caused one, or 1%, of the cooking burns in the Commonwealth in 2003.

The following graph shows the leading causes of cooking related burn injuries in Massachusetts in 2003 regardless of the type of burn.



Children Under 5 Are 3.7 Times as Likely to be Burned by Cooking Activities
Eighteen (18), or 22%, of the cooking-related burn victims were under age five. This age group was 3.7 times as likely to be burned by cooking related activities. Seven (7), or 9%, were aged between five and nine years of age; four, or 5%, were between 10 and 14; 10, or 12%, were between 15 to 24 years old; 11, or 13%, were between 25 and 34; 10, or 12%, were between 35 and 44; another 11, or 13%, were between 45 and 54; four, or 5%, were between 55 and 64; another four victims, or 5%, were between 65 and 74; three, or 4%, of the victims belong to the age group between 75 and 84 years of age, and no one over the age of 80 received a cooking-related burn, in 2003. The youngest victim of a cooking-related burn was a one-year old boy, while the oldest victim was an 80-year old woman who received his burn injuries from a clothing ignition while cooking.

The cause of burns varied with age. Pre-schoolers generally do not cook. They do, however, grab pot handles and sometimes get underfoot when adults are cooking. Cooking liquids or cooking grease frequently scalds them. Parents should keep young children away from the stove and food preparation areas while adults are cooking.



Older Adults at Risk for Cooking-Related Burn Injuries
Older adults over the age of 65 are likely to burned while cooking. Seven older adults received burn injuries as a result of cooking in 2003. Five, or 71%, of these victims were men and two, or 21%, were women. The three older adults, two men and one woman had their clothing ignite while they were cooking; two older men received burns from coming into contact with a stove, and one older man and one older woman each received a burn from cooking liquids.

Clothing Ignitions while Cooking
In 2003, seven, or 8% of the victims with cooking-related burns, were injured when their clothing ignited while cooking. Five (5), or 71%, of the victims of clothing ignitions while cooking were men and two, or 29% were women. Three (3) were 65 years old or older. Loose-fitting sleeves can come into contact with burners and catch fire.

According to data collected by the Massachusetts Fire Incident Reporting System, unattended and other unsafe cooking practices caused 5,317 fires in 2002. These fires killed four civilians and caused 101 civilian injuries and 40 fire service injuries along with $11.5 million in losses. Many of these people also suffered from smoke inhalation

Serious Burns from Cooking
On February 2, 2003 a 60-year old man received flame burns to 60% of his body surface area when while making toast, the sleeve of his bathrobe went inside the toaster and caught fire.

On June 21, 2003 a 2-year old girl burned 20% of her body surface area when hot water that was boiling on the stove was accidentally spilled on her.

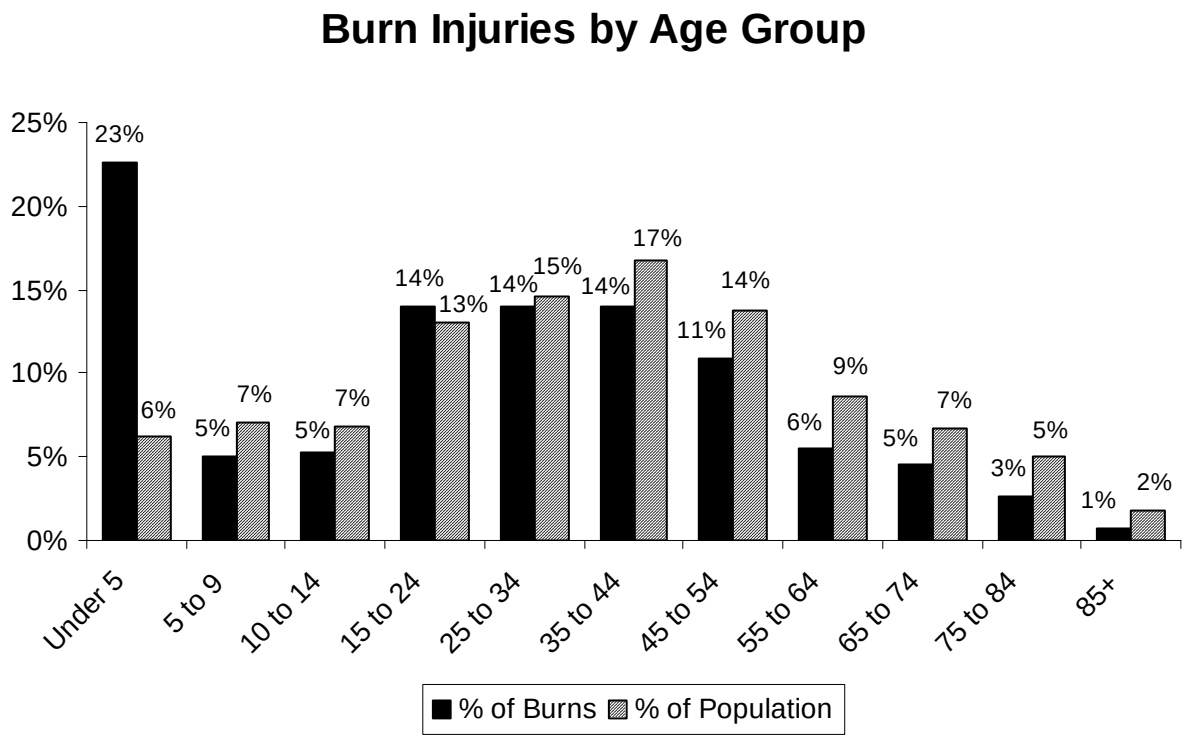
On August 27, 2003, a 54-year old man received flame burn injuries to 21% of his body when he opened the cover to his grill and flames shot up out of the grill.

On November 21, 2003, a 50-year old Worcester man received burns to 22% of his body when his wife poured hot cooking liquids over him while he was visiting his daughter's home. There was an ongoing domestic dispute in the family.

Safety Measures
- Never leave cooking food unattended.
- Keep children at a safe distance from all hot items by using playpens, high chairs, etc.
- Create a safe zone for children.
- Test all heated food before giving it to young children.
- Keep pot handles turned in over the stove or countertop.
- Always use oven mitts or potholders.
- Secure loose sleeves or wear short sleeves while cooking.
- Keep a large pot lid handy to put out stove top fires.
- Never use water on a stovetop grease fire.
- Read and follow directions when using microwave ovens and other cooking appliances.
- Children should not be allowed to use cooking/heating appliances until they are mature enough to understand safe-use procedures and tall enough to safely handle items and reach cooking surfaces.
- If cabinets exist over cooking surfaces use them to store only items that will not be needed during cooking.
- When barbecuing, use only charcoal lighter fluid to start a fire. Once the coals have been ignited, never add more charcoal lighter fuel to the fire; the container may explode in your hand.
- Dispose of used coals in a proper container away from the house or porch.

Burn Injuries by Age Group

Although burn injuries were reported in all age groups, very young children suffer more than their share. Almost one quarter (23%) of all burn victims were children under the age of five. Ninety-four (94) children under age five were seriously burned in 2003. Twenty-one (21), or 5% of the burn injuries, occurred to children aged five to nine; 22, or 5%, were youths aged 10 to 14. Sixty (60), or 14% of the burn victims, were young adults aged 15 to 24. Fifty-nine (59), or 14% of 2003 burn victims were adults aged 25 to 34. Fifty-eight (58), or 14%, were people aged 35 to 44. Forty-five (45), or 11% of the burn injuries, occurred to adults aged 45 to 54; 23, or 6% of people who were reported to have incurred burns were between 55 and 64; 19, or 5% of all burn victims, were older adults in the 65 to 74 age group, 11, or 3% were in the 75 to 84 years old age group and three adults over the age of 85, or 1% of all reported burn victims in 2003, received burns of more than 5% of their body surface area. There was one victim with an unknown age.



Children Under 5 At Highest Risk of Burn Injuries

The graph below compares the percentage of burn injuries incurred by each age group with the percentage of that age group in the general population. Only 6% of the population in Massachusetts is under the age of five (source: 2000 U.S. Census data). We would expect therefore that children under five would account for a maximum of 6% of the burn injuries. In fact, they accounted for 23% of the reported burn injuries in 2003, making them almost four times more likely to suffer burn injuries. Children of this age group are the most dependent on others to protect them and are the least able to move out of harm's way unassisted.

The threat of burns is most severe for children less than two-years old. Sixty-one (61) babies under the age of two, accounted for 15% of all burn victims, but all children under the age of five accounted for 6% of the Massachusetts population.

For the first time, the burn injuries from scalds is not the leading cause of burn injuries for the majority of age groups. Burns from fires were the leading cause for five of the six age groups over the age of 15 years old. Scalds were the leading cause of burn injuries in the age groups children under five and children between the ages of five and nine. Burns from explosions were the leading cause for the age group 10 to 14. Flame burns were the leading cause of burn injuries to the people in the age group 55 to 64 years old.

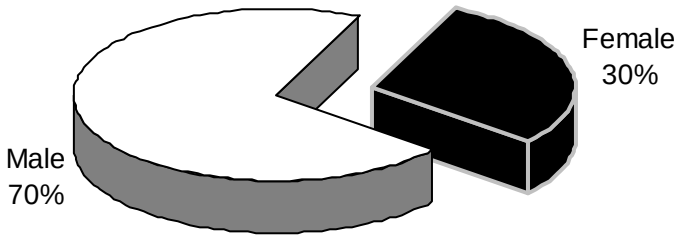
To learn more about the specific causes and prevention strategies for each age group, please look at the age specific sections within *Burn Injuries by Age Group*.

Causes of Burn Injuries by Age and Gender

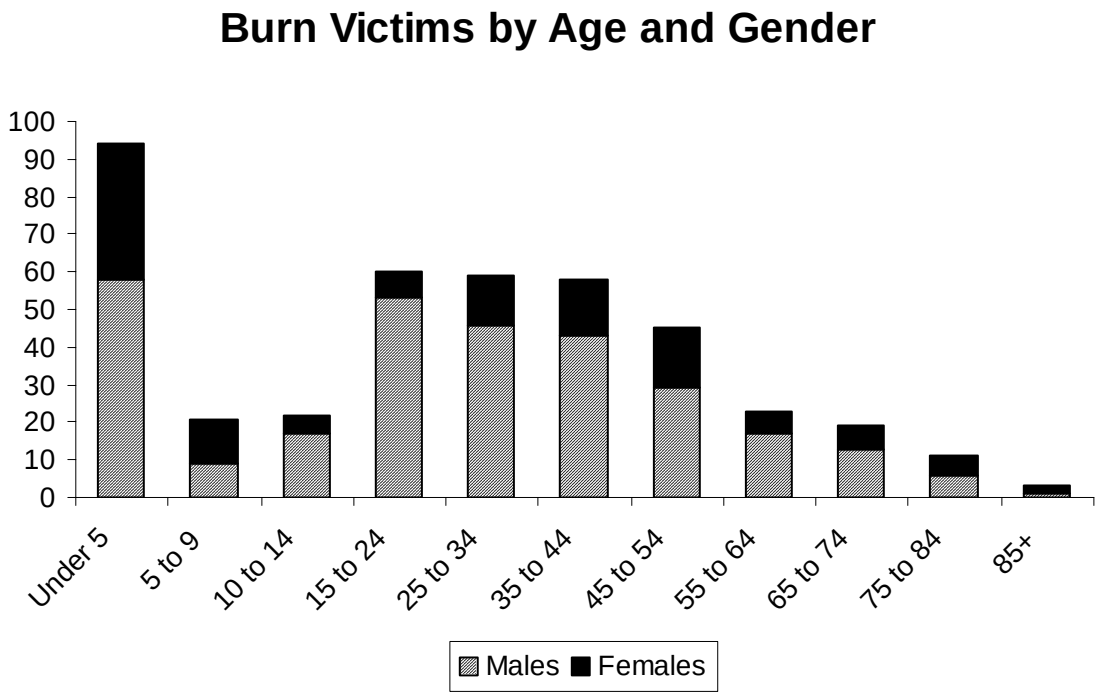
The leading causes of burn injuries vary widely between age groups depending on the nature of activities in which people are involved. Children under five are busy exploring their environment and reaching for anything in their grasp. Thirty-five percent (35%) of the burns incurred by these young children were scalds caused by hot beverages and another 22% were caused by hot tap water scalds. Cooking liquids scalds, gasoline and other ignitable liquids were frequent causes of burn injuries to older teens and young adults.

Parents of young children must be educated about the danger of scalds from hot beverages, cooking liquids and tap water. Teens and young adults need information about cooking safely, procedures to follow when a car overheats and the correct uses of gasoline. To be effective, burn prevention educators must develop strategies that address the risk faced by each age group.

Burns by Gender



Up until 85 years of age, males were burned more frequently than females. In 2003, almost three-fifths of the burn victims were male. Two hundred and ninety-three (293), or 70%, of the 416 burn victims were male, and 123, or 30%, were female.



Children Under 5

Almost 1/4 of Reported Burns Incurred by Children Under 5
Ninety-four (94), or 23%, of the burn injuries reported to M-BIRS in 2003 were incurred by children under five years old. According to the 2000 U.S. Census, only 6% of Massachusetts residents are under the age of five. Children under five were four times as likely to be burned as were members of the general population. No other age group faced a risk this high. Sixty-two percent (62%) of burned pre-schoolers were male and 38% were female.

Scalds Caused 80% of Burns to Pre-Schoolers
Scalds caused 75, or 80%, of the burn injuries incurred by children under five. Thirty-three (33) were from hot beverages, 21 from hot tap water, eight were from hot cooking liquids, another eight were from hot food; two were from clothes irons, two from unidentified sources and one from a hot oil.

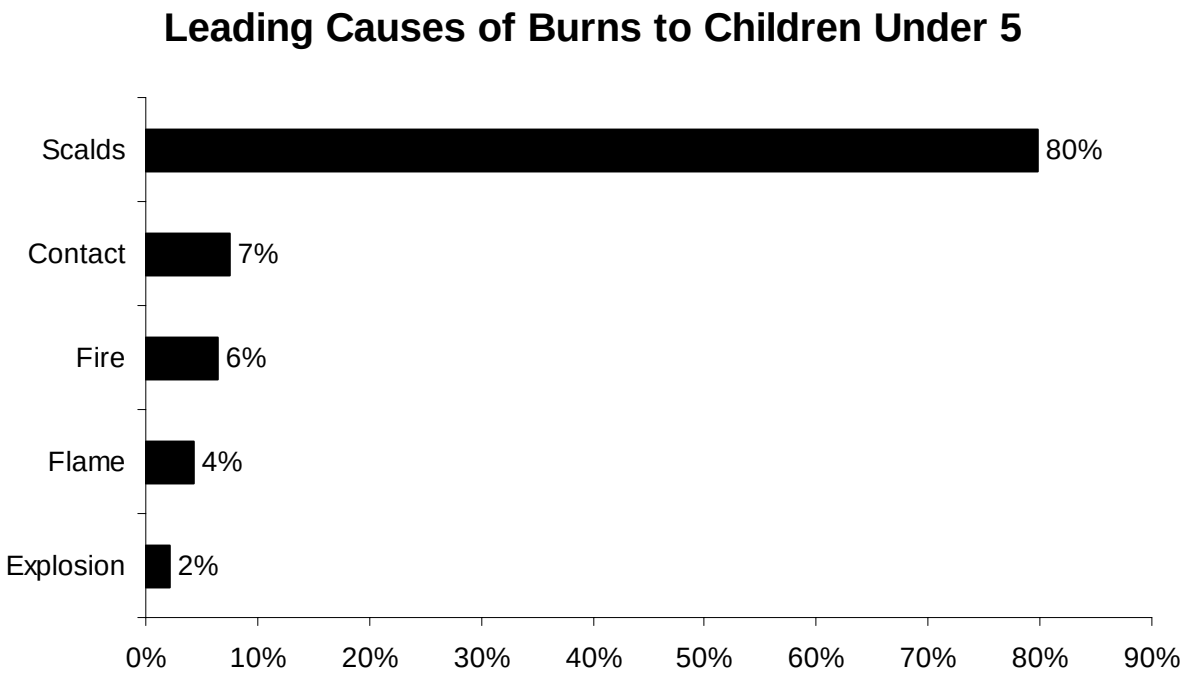
Contact burns accounted for seven, or 7%, of the injuries to children under the age of five. Two children received their burns by touching a hot clothes iron. Another two children touched a

heater. One burn was received from touching a radiator. Contact with a stove and a hot pipe caused the last two burn contact burn injuries to children under five in 2003.

Fire caused six, or 6%, of the injuries to this age group. Three of these children under five were burned in house fires. Two were burned in bonfires and one was burned in a brush fire.

Flame burns caused four, or 4%, of burns to this age group. One child was injured when his clothes ignited while someone was cooking. Another child was burned when the lighter he was playing with ignited his clothes. A heater and ignitable liquids each accounted for one flame burn injury to children under five.

Burn injuries from explosions caused two, or 2%, of the total burn injuries to children under five years of age. An electrical explosion and a propane explosion each caused on burn injury to a child under the age of five.



Children Ages 5 to 9

5% of Reported Burn Injuries Incurred by Children 5-9
Twenty-one (21), or 5%, of the burn injuries reported in 2003 were incurred by children between five and nine years of age. Twelve (12), or 57%, of the burn victims were male, and nine, or 43%, were female. Children in this age bracket accounted for 7% of the population of Massachusetts and 5% of the burn injuries in 2003.

Scalds Caused 6% of All Burns to Children 5-9
The leading causes of burn injuries to children aged five to nine were scalds, flame burns, fires, contact burns, and explosions.

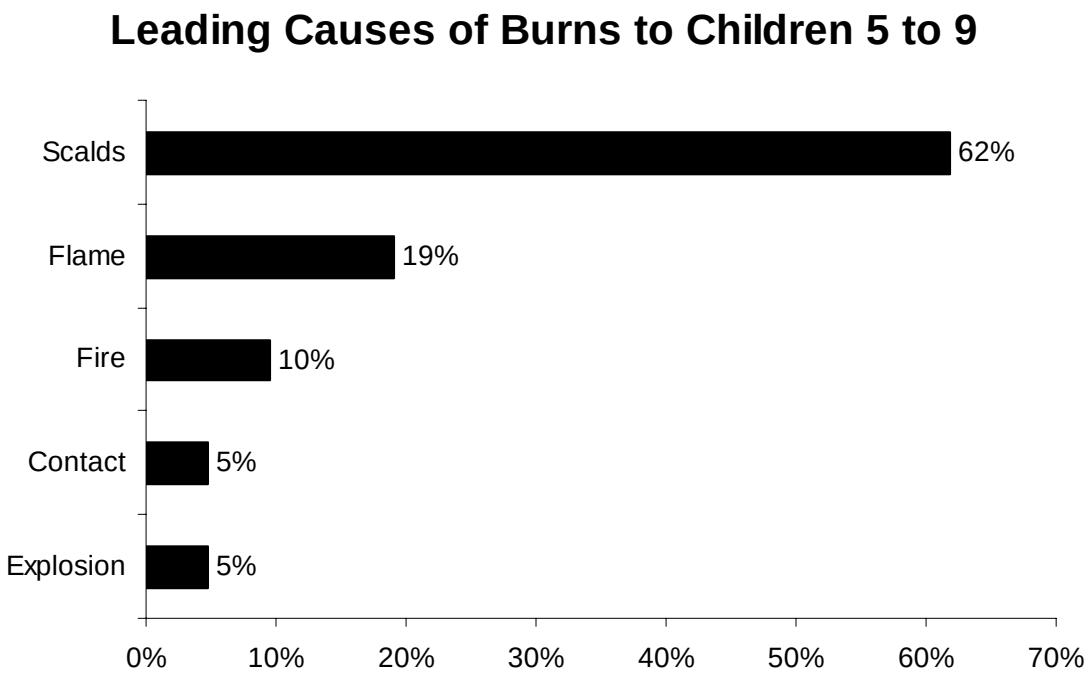
Scalds caused 13, or 62%, of the burn injuries incurred by children aged five to nine in 2003. The scald burn injuries included five from hot beverages, three from hot food, three from cooking liquids, one from cooking grease and one from hot tap water.

Flame burns accounted for four, or 19%, of the burn injuries to this age group. Each of the four injuries was from a different cause. One child was "playing" with fireworks. Another child in this age category who suffered a flame burn injury was playing with a lighter that ignited his clothes. A clothing ignition from a candle and a portable heater caused the other two flame burns in this age group.

Two house fires accounted for two, or 10%, of the burn injuries to children between the ages of five and nine.

Contact burns caused one, or 5%, of the burns to children aged five to nine. One child was injured when he touched a hot motorcycle.

An explosion caused by a child playing with gasoline accounted for another 5% of the burn injuries to this age group.



Children Ages 10 to 14

5% of Reported Burns Incurred by Children 10-14
Children between the ages of 10 and 14 suffered 22, or 5%, of the burn injuries reported in 2003. Seventeen (17), or 77%, were male and five, or 23%, were female. Children in this age bracket accounted for 7% of the population in the Commonwealth of Massachusetts but 5% of the total reported burn injuries. At this age, children are exploring their environment more on their own, but often without the maturity or experience to reason out cause and effect.

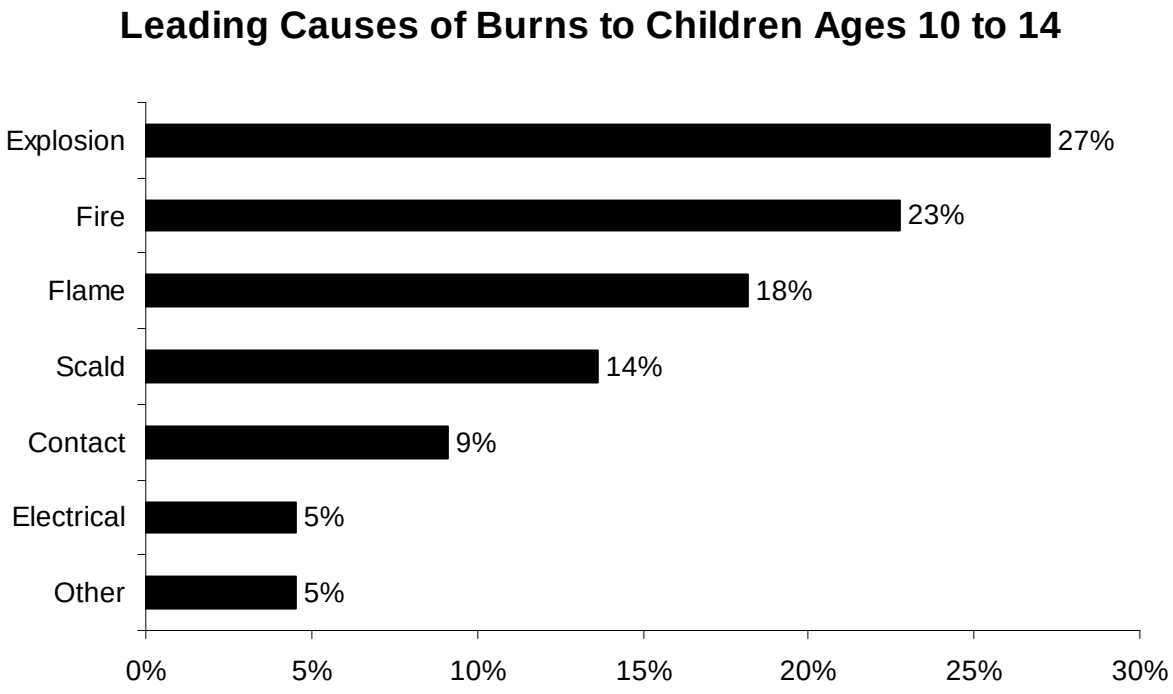
Explosions Were the Leading Cause of Burns to Children 10-14
Explosions caused six, or 27%, of the 22 burn injuries to children ages 10 to 14. Two of the children in this age group were hurt when an aerosol can exploded. Explosions from a gas barbeque, flammables, ignitable liquids and propane were each the cause of one burn injury to children of this age group.

Five, or 23%, of the burn injuries to this age group were due to fires; three pre-teens were injured in house fires, one received burns from a campfire and one from a bonfire.

Four pre-teens, or 18%, were injured by flame burn injuries. Three involved children playing with gasoline. The other child was hurt playing with a lighter.

Scalds represented three, or 14%, of the burns incurred by children aged 10 to 14. All three were scalded by cooking liquids.

Asphalt and hot wax accounted for two, or 9%, of the contact burn injuries to this age group.



There was one unspecified electrical burn injury to people in this age group accounting for 5% of the burn injuries to children between the ages of 10 and 14.

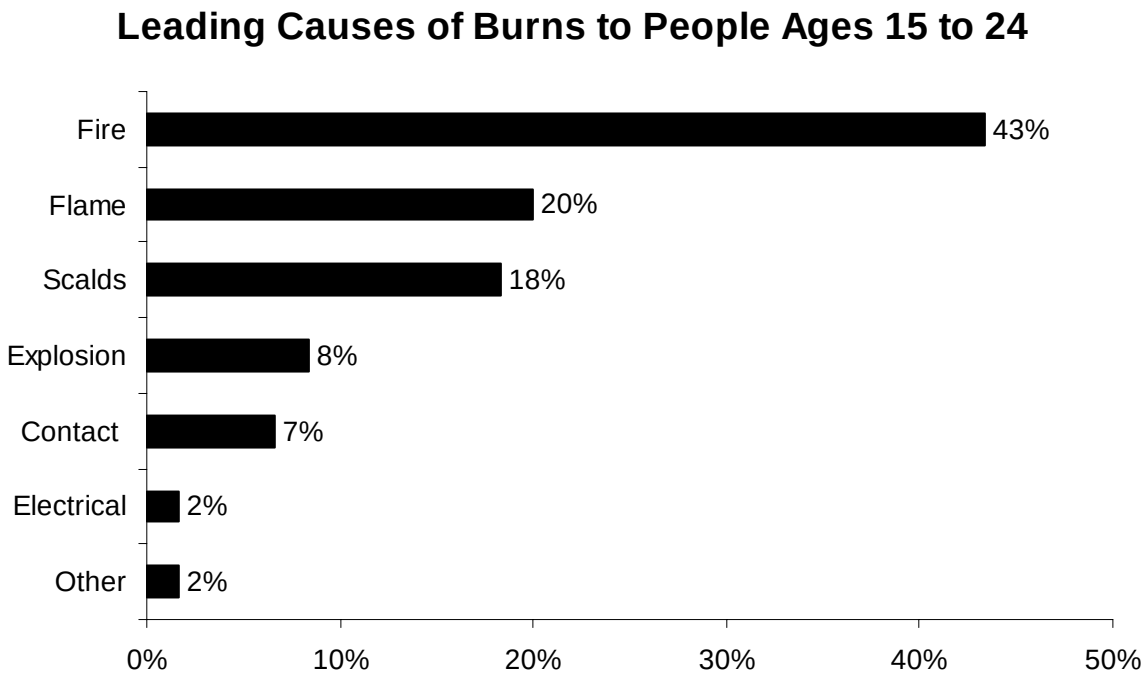
A 12-year old boy, accounting for 5% of the burn injuries to his age group, was the victim of a sunburn on his back.

Ages 15 to 24

14% of Reported Burn Victims Between 15-24
Teens and young adults between the ages of 15 and 24 incurred 60, or 14%, of the burn injuries reported in 2003. Fifty-three (53), or 88%, were male and seven, or 12%, were female. Young adults aged 15 to 24 account for 13% of the population of Massachusetts and 14% of the burn injuries in 2003. Twelve (12), or 20%, of the burn injuries incurred by this age group were work-related, and they were all male.

43% of Burns Were from Fire
Burns from fire were the leading cause of burn injuries to this age group. Forty-three percent (43%), or 26, of the burn injuries incurred by people aged 15 to 24 were burn injuries from fires. Ten (10) victims received burns from camp or bonfires, nine from house fires, two received burns at The Station nightclub fire, two more received burns from motor vehicle fires, one young adult received a burn from a brush fire, and two young adults were burned at unspecified fires.

Twelve (12), or 20%, of the burn injuries were caused by flames. Three were caused by playing with gasoline, and another three were caused by other ignitable liquids. Assaults accounted for



two flame burn injuries from this age group. Burns from explosives, fireworks, a medical procedure and hot metal accounted for one injury each.

Eleven (11), or 18%, of the burn injuries to people 15 to 24 years of age were caused by six cooking liquid scalds, and one scald each from a car (not the radiator), a car radiator, hot food, hot tap water and liquid wax.

Explosions injured five, or 8%, of people in this age category. A cigarette, cooking liquids, flammables, a motorcycle and propane each caused a burn injury to a member of this age group in an explosion.

Contact burns accounted for four, or 7%, of burn injuries suffered by victims between the ages of 15 and 24. Hot asphalt, a candle, a stove and a wood stove each accounted for one contact burn injury to this age group.

One, or 2%, of the victims between the ages of 15 and 24 received his burn injuries from chemicals while attempting to make a bomb.

There was one unspecified electrical burn injury to people in this age group accounting for 2% of the burn injuries to children between the ages of 10 and 14.

Ages 25 to 34

14% of Burn Victims Were Between 25 and 34
Fifty-nine (59), or 14%, of the burn injuries reported in 2003 were incurred by people between 25 and 34 years of age. Forty-six (46), or 78%, of the victims were male and 13, or 22% were female. Nine (9), or 15%, of the burn injuries suffered by this age group were work-related. People between the ages of 25 and 34 accounted for 15% of the population of Massachusetts while accounting for 14% of the total number of burn injuries reported in 2003.

44% of Burn Injuries Were From Fires
Burns from fires were the leading cause of burns to people between the ages of 25 and 34. Twenty-six (26) burns accounted for 44% of the burn injuries to this age group. These fire-related burns included 15 victims of The Station nightclub fire, seven victims of house fires, two burns from brush fires and another two burns from bonfires.

Scalds were tied for the second most burns in this age group, accounting for 11 burns, or 19%. Five of the scalds were from cooking liquids, three were from hot tap water, and one each from a hot beverage, hot oil and cooking grease.

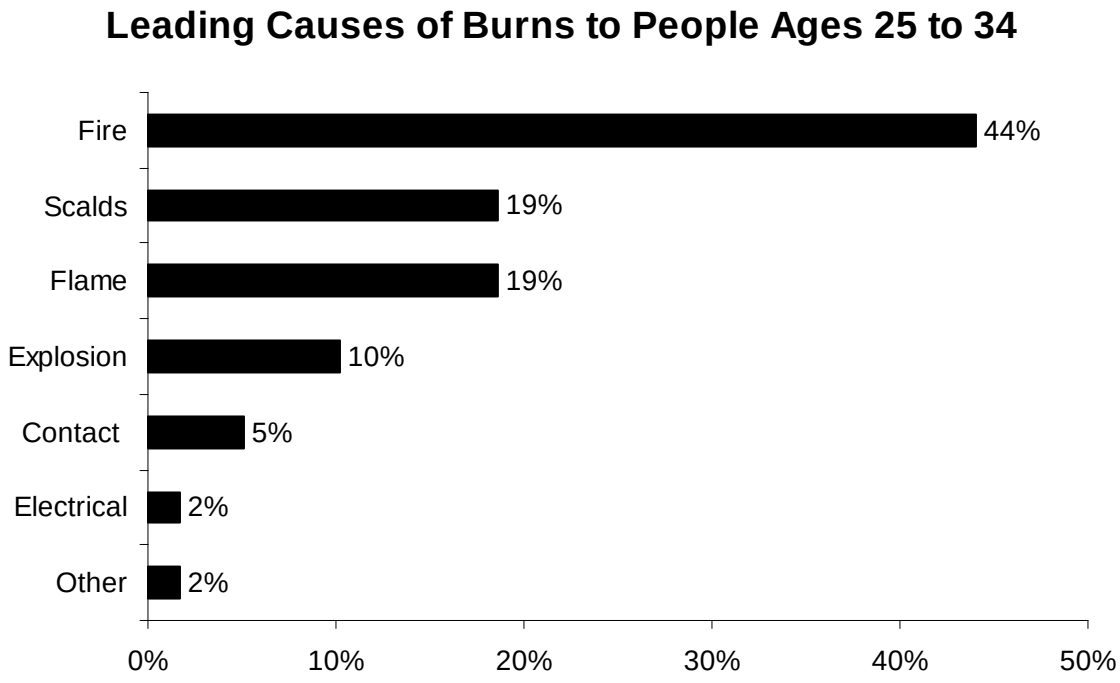
Flame burns also caused 11, or 19%, of the injuries to 25-34 year olds. These flame burns included two from ignitable liquids, and one each from alcohol, an assault, a barbeque gas grill, a clothing ignition while cooking, drugs, a flammable material, smoking in bed and a stove.

Six (6), or 10%, of the burns to 25 to 34 year olds were caused by explosions; two involved flammable materials. Alcohol, a car part, a cigarette, and ignitable liquids were each involved in one explosion.

Contact burns accounted for three, or 5%, of the burn injuries to people between the ages of 25 and 34. These burns were incurred from contact with a hot car part, hot wax and an unspecified cooking act.

One victim, accounting for 2% of the injuries to this age group, was injured by electrical burns. This victim received an unspecified electrical burn.

Another victim, or 2%, of the burns incurred by this age group were classified as an *Other* burn. Chemicals burned this victim.



Ages 35 to 44

14% of Reported Burn Victims Were Between 35 and 44 Years of Age
Fifty-eight (58), or 14%, of the burn injuries reported in 2003 occurred to people between the ages of 35 and 44. Forty-three (43), or 74%, of the victims were male and 15, or 26%, of the victims were female. Adults between the ages of 35 and 44 accounted for 17% of the Massachusetts population but only 14% of the reported burns in 2003.

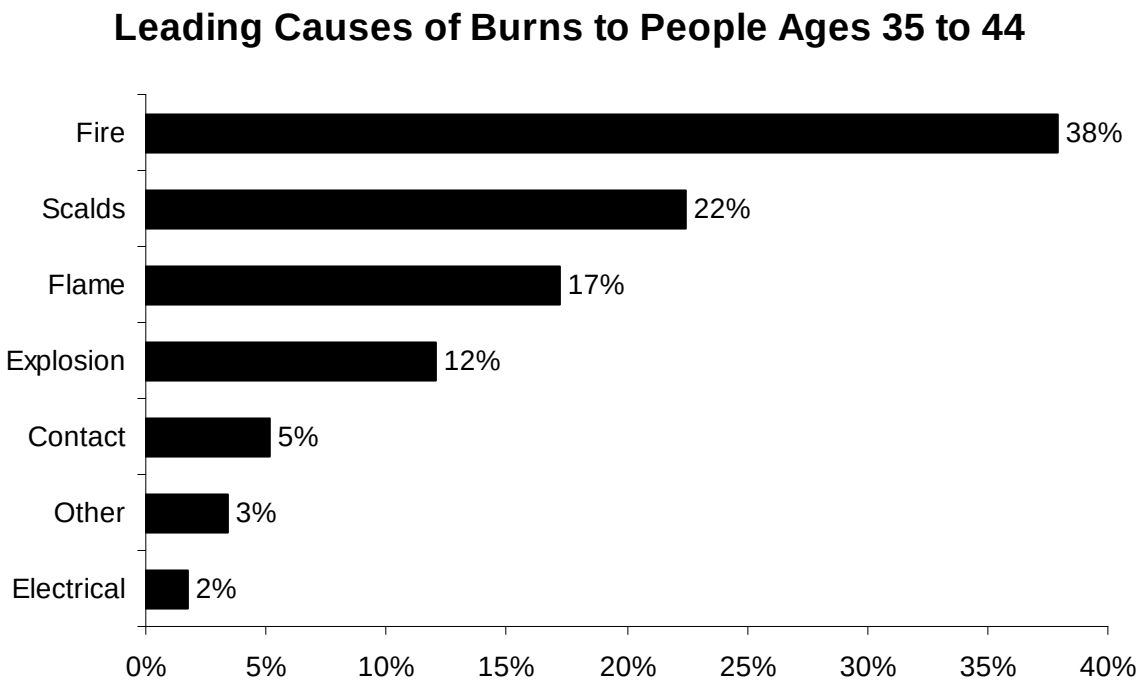
Over 1/5 of Burn Injuries Were Work-Related
Fourteen (14), or 22%, of the burn injuries incurred by this age group were work-related. Thirteen (13), or 93% of these work-related burn victims were male, and one, or 7%, was female.

38% of Burn Injuries Were from Fires
Burn injuries from fires were the leading cause of burn injuries to adults between the ages of 35 and 44. Twenty-two (22) victims accounted for 38% of the burn injuries to this age group. Nine (9) victims were from The Station nightclub fire, another victim was burned in another structure fire, six were from house fires; four were from camp or bonfires, one was from a brush fire, and one victim received his burn injury from attempting self-immolation in his motor vehicle.

The next leading cause of burns to people between 35 and 44 years of age were scalds. Thirteen (13), or 22%, of these burn injuries were caused by scalds. These injuries included four scalds from cooking liquids, three from hot beverages, two from hot tap water, and one each from cooking grease, hot oil and an unspecified cooking act.

Flame burns were the third leading cause of burn injuries to adults between the ages of 35 and 44. They caused 10, or 17%, of the burn injuries to this age group. Two of the flame burns involved gasoline and a third involved another ignitable liquid. Two flame burns were from smoking; one was from smoking in bed and the other was a clothing ignition. Two more were from stoves. A successful attempt at self-immolation and welding each caused one flame burn injury in this age group.

Explosions accounted for seven, or 12%, of the total burn injuries to this age group. Two of these seven explosions were caused by chemicals. The other five explosions were caused by an arson, a car part, cooking liquids, ignitable liquids, and propane.



Contact burns accounted for three, or 5% of the burns to this group. One of these injuries was from contact with a hot machine, another was from contact with a chemical and the other was a contact burn from a hot oven.

Other burns accounted for two, or 3% of the injuries to people between the ages of 35 to 44. One of these injuries was due to a chemical burn while the other was due to a sunburn.

One victim, accounting for 2% of the injuries to this age group, was injured by electrical burns. This victim received an unspecified electrical burn.

Ages 45 to 54

11% of Reported Burn Injuries Were Between 45 and 54 Years of Age
People between the ages of 45 and 54 incurred 45, or 11%, of the reported burns in 2003. Twenty-nine (29) or 64%, of the victims were male, and sixteen, or 36%, were female. Seven (7) of the 45 burn victims aged 45 to 54, or 16%, were burned while at work. This age group represents 14% of the population of Massachusetts while it only received 11% of the burn injuries in 2003.

Fires Cause Almost 1/3 of the Burn Injuries
Burns from fires caused 14, or 31% of the burn injuries to victims 45 to 54 years old. Nine (9) house fires, two motor vehicle fires, two camp or bonfires, and an unspecified fire accounted for 31% of the burn injuries to this age group.

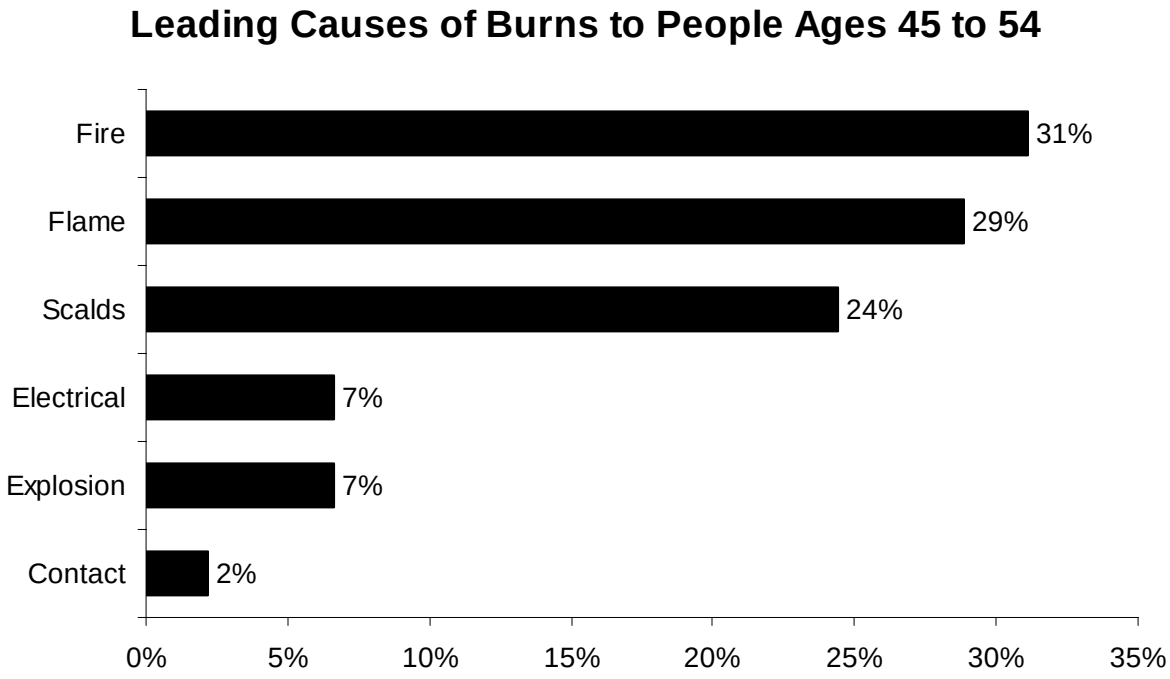
Flame burns were incurred by 13, or 29%, of the burn victims between the ages of 45 and 54. Three of these flame burns were caused by welding. Another three were caused by cooking; one from a barbeque grill, one from cooking liquids and another from a clothing ignition. There were two unsuccessful attempts at self-immolation. A candle, gasoline, ignitable liquids, propane and a woodstove were each responsible for one flame burn injury to this age group.

Scalds were the third leading cause of burn injuries to this age group. In 2003, scalds caused 11, or 24%, of the burn injuries to people aged 45 to 54. These scald burns included seven from cooking, six from cooking liquids and one from hot cooking grease; two from hot beverages; and one each from domestic violence and hot tap water.

There were three electrical burns, accounting for 7% of the burns to people between 45 and 54 years of age. Two were electrocutions and one was from an unspecified electrical accident. All three were work-related.

Another three members of this age group were victims of explosions. They accounted for 7% of the burn injuries to this age group. A car radiator, hot metal and smoking each caused one explosion that caused one burn injury to people in this age group.

One (1), or 2%, of the burns to victims between the ages of 45 to 54 suffered contact burns. This contact burn was from contact with a hot machine.



Ages 55 to 64

6% of Burn Victims Were Between 55 and 64 Years Old
Twenty-three (23), or 6%, of the burns reported in 2003 were incurred by people between the ages of 55 and 64. Seventeen (17), or 74%, of the victims were male, and six, or 26% were female. Six (6), or 14%, of the 23 burn injuries incurred by people between 55 and 64 years old were reported to be work-related. People of this age group represent 9% of the total population of Massachusetts but only received 6% of the burns in 2003.

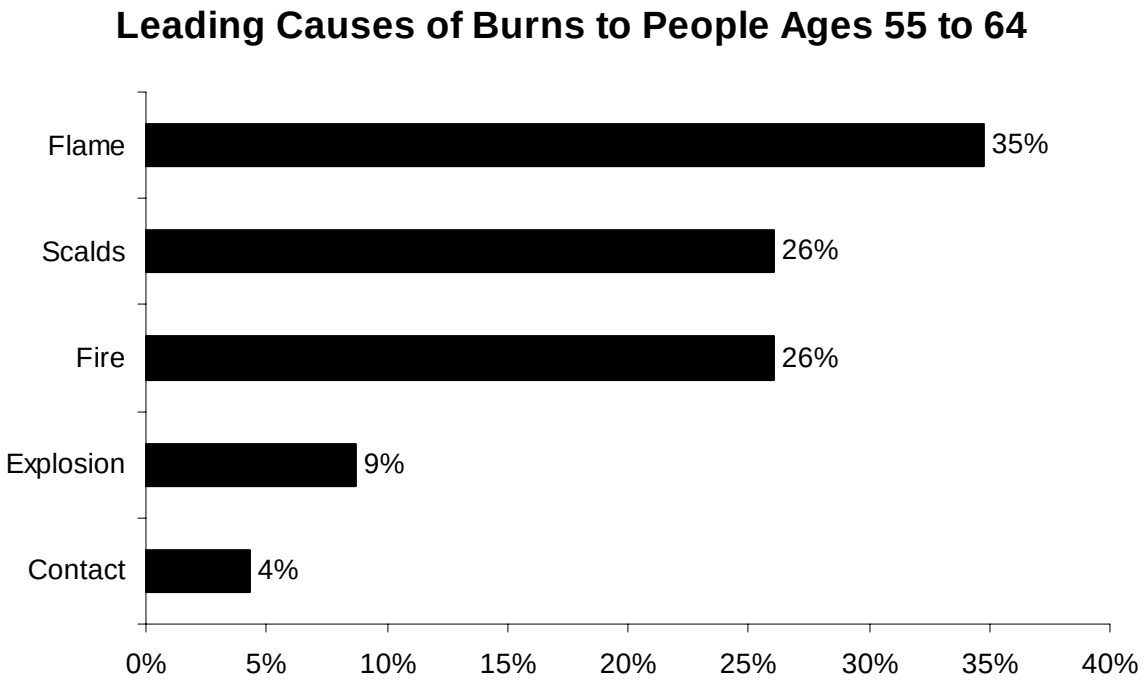
Over 1/3 of Burn Injuries Were Flame Burn Injuries
Flame burns accounted for eight (8), or 35%, of the injuries to this age group. A clothing ignition while cooking, cooking liquids, gasoline, a clothing ignition from a match, a successful attempt at self-immolation, smoking in bed, a clothing ignition from smoking and a welding accident each caused one flame burn injury to this age group.

Scalds were tied for the second leading cause of burn injuries to this age group. Six (6), or 26%, of the burn injuries incurred by people between the ages of 55 and 64 were scalds. These scald burns included two from cooking liquids, and one each from hot beverages, a hot machine, hot oil and steam.

Fires also caused six (6), or 26%, of the burn injuries to this age group. Five people in this age group were burned in house fires, and one person was burned in an airplane crash.

Two (2) victims, accounting for 9% of the injuries to people between the ages of 55 and 64, received their injuries in explosions. Both of these explosions were caused by a cutting torch.

One victim received a contact burn from a hot wax accounting for 4% of the burn injuries to adults between the ages of 55 and 64.



Over 65

33 Burn Victims Over 65
Thirty-three (33), or 8%, of the burn victims in 2003 were over 65 years old. Nineteen (19) were between 65 and 74; 11 were between 75 and 84; and three (3) were over 85 years old. Twenty (20), or 61% of the victims were male, and 13, or 39%, were female. These percentages are very consistent with those from 2001 and 2000. Older adults represent 14% of the total Massachusetts population but only 8% of the burn injuries in 2003.

Fires Are the Leading Cause of Burns to Older Adults
Burns from fires were the leading cause of burn injuries to adults over the age of 65. Nine house fires, two brush fires and one airplane crash accounted for all 12 fire-related burn injuries. Two

of the house fires resulted in fatalities. One was caused by a portable heater and the cause of the other house fire was unspecified. The airplane crash also resulted in a fatality.

Nine (9), or 27%, of the burn injuries to people over the age of 65 can be attributed to flame burns. Four of the burn injuries were attributed to cooking; another four were from smoking; and one was from a portable heater.

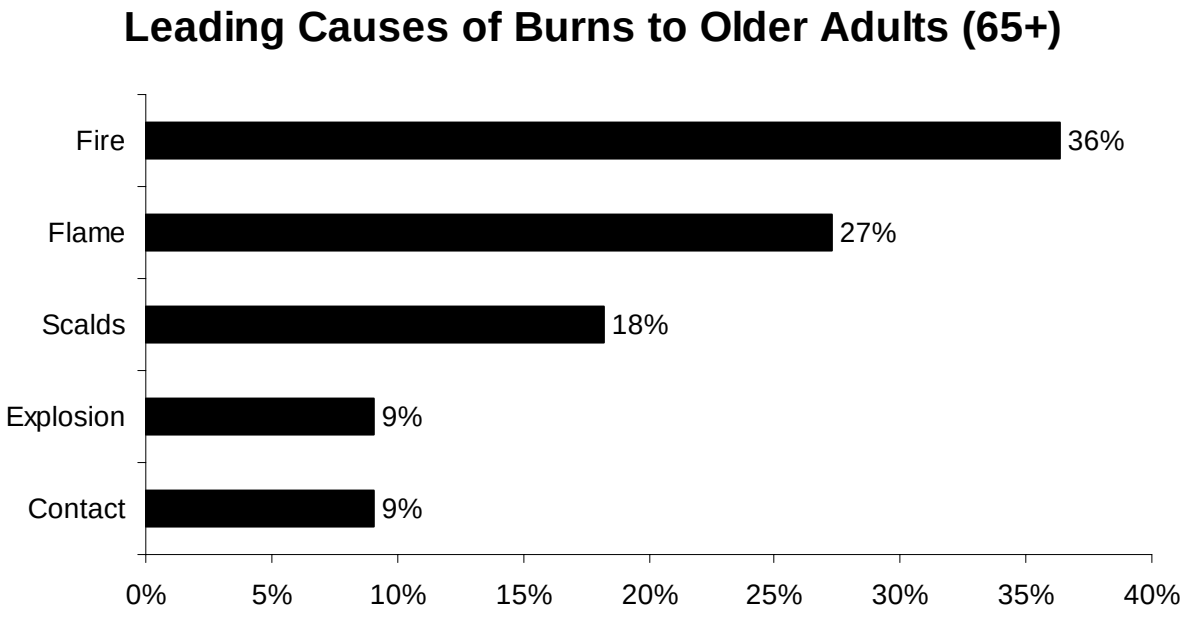
Of the cooking-related flame burns, three of the four burns were from clothing ignitions while cooking and the other was from a stove. Of the smoking-related burns, two of the four injuries were from cigarette lighters, while one was a clothing ignition while smoking; and the other was from an unspecified smoking act.

According to the Burn Awareness Coalition, smoking when tired, drinking alcohol or taking medications which can cause drowsiness, wearing loose fitting clothing while cooking, kitchen fires from unattended cooking, and grease fires on the stove top are leading causes of burn injuries to older adults. During 2003, cooking and smoking accounted for 15, or 45% of the reported burn injuries in Massachusetts incurred by older adults.

Clothing Ignitions Cause Over 1/5 of Burns To Older Adults

Clothing ignitions to older adults has consistently been an issue, but this trend is on a decline. During 2003, only four (4), or 21%, of the burn injuries to those victims over the age of 65 were due to clothing ignitions. These types of injuries accounted for 1% of the total 416 burn injuries reported in Massachusetts in 2003.

Six (6), or 18%, of these burns were caused by scalds. Four were from hot tap water and two were from cooking liquids. One of the hot tap water scalds resulted in an 86-year old woman succumbing to the burn injuries she received when she was in a bathtub full of scalding water.



Three (3), or 9%, were caused by explosions. Two explosions were caused by smoking on oxygen; and the other explosion was caused by flammables.

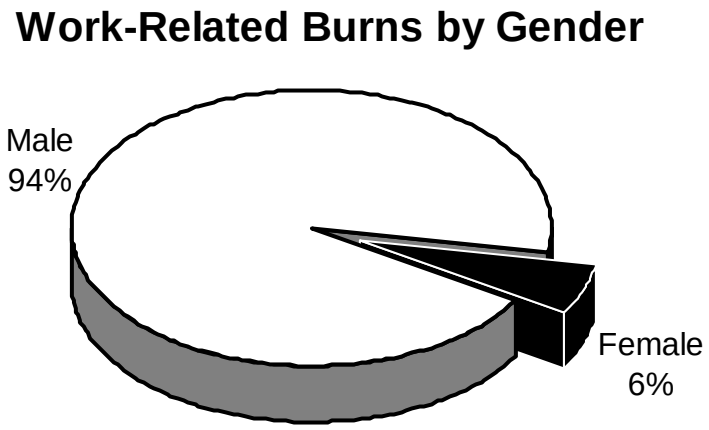
Another three (3) of the victims over the age of 65 received contact burns resulting in 9% of the burns to this age group. Contact with a portable heater a radiator and a stove each caused one of the burn injuries to this age group.

Safety Tips

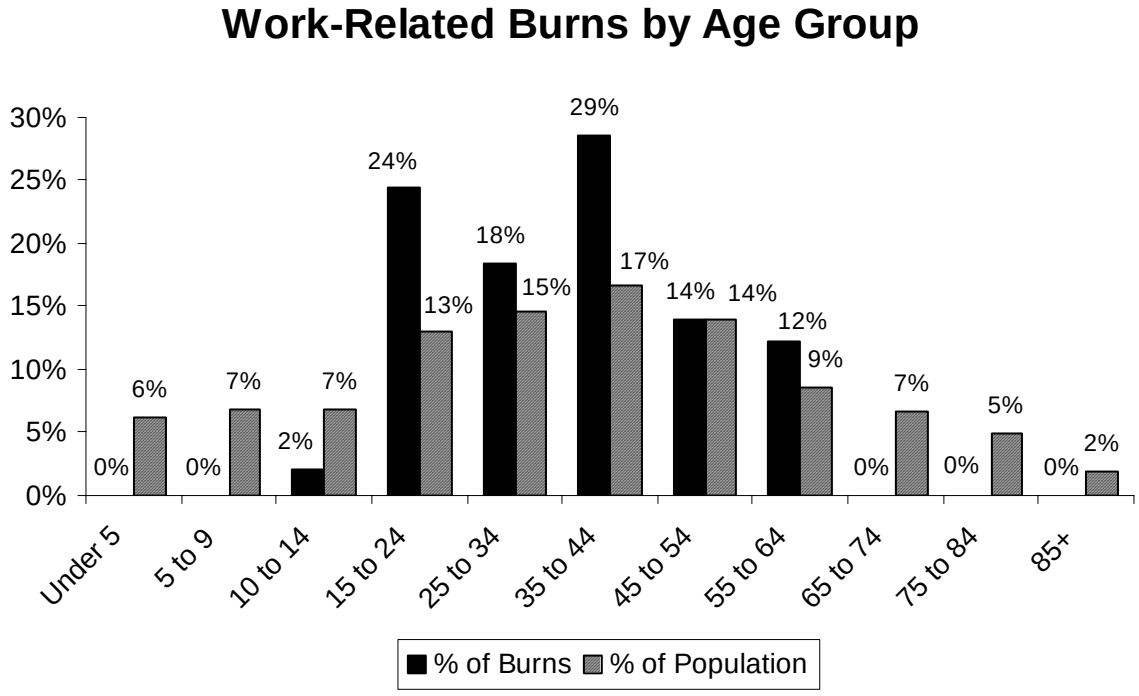
- Do not smoke when you are tired, drinking alcohol or taking medications, which make you drowsy. If you must smoke, make sure there are working smoke detectors in the immediate vicinity.
- Wear clothes with tight fitting sleeves and watch for clothes touching elements on the stove.
- Do not use a cooking stove for heating purposes or for drying clothes.
- Never leave food that is cooking unattended. Set a kitchen timer to remind you to turn off the burners and/or the oven. If you must leave the kitchen, take a wooden spoon or potholder as a reminder that you have left something unattended on the stove.
- Keep stove surfaces clean of built up grease.
- Do not attempt to lift or carry heavy pots of hot liquid or food.
- Cook with the pot and pan handles turned in.
- Remember “Stop, Drop, & Roll” – It just may save your life.

Work-Related Burn Injuries

12% of Reported Burns Occurred at Work
Massachusetts hospitals indicated that 50, or 12%, of the 416 burn injuries reported in 2003 occurred while the victim was at work. Men were much more likely to be burned while working than women. Forty-seven (47) men, 94%, and three women, 6%, were burned at work in 2003. This is a larger disparity than in 2002 when 84% of the work-related burn injury victims were men and 16% were women.



98% of Work-Related Burns Are Incurred by People Between 15 and 54
One (1), or 2%, of the 50 work-related victims where age was known was between 10 and 14 years of age. Twelve (12), or 24%, were between 15 and 24 years of age. Nine (9), or 18%, of



the victims were between 25 and 34 years of age; 14, or 29%, belonged to the 35 to 44 age group. Seven (7), or 14%, of work-related burn injuries were victims 45 to 54 years old. The oldest age group to have a work-related burn injury was the 55 to 64 group and they garnered six, or 12% of the burn injuries in the workplace. The youngest person to receive a work-related burn in Massachusetts in 2003 was a 14-year old boy who was scalded by cooking liquids. The oldest victim to receive a work-related burn was a 61-year old man who was scalded by hot oil. The age was unknown for one male who received a work-related burn.

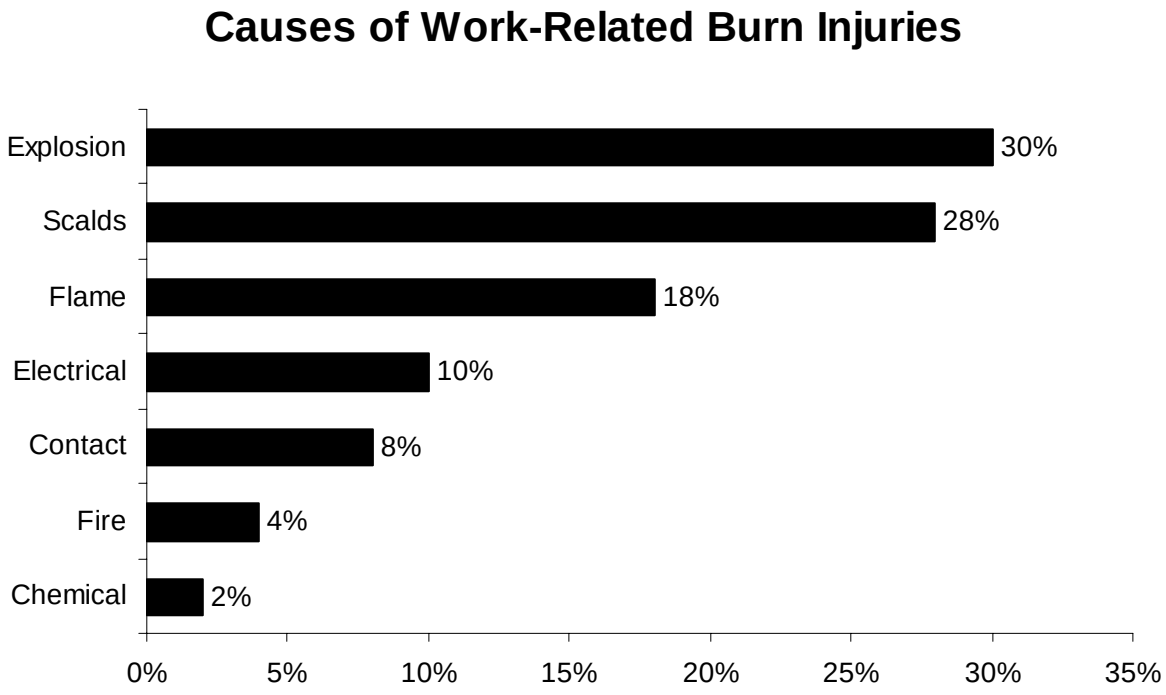
Almost 1/3 of Work-Related Burns Were Explosions

Fifteen (15), or 30%, of the 50 work-related injuries were explosions in 2003. Three of these work-related explosions involved propane; two were from ignitable liquids; two more involved flammable materials, two were from cigarettes; another two were from chemicals and two more were caused by cutting torches. One work-related explosion was caused by a piece of hot metal and another was caused by flammables.

Scalds were the second leading cause of work-related burns in 2003. These 14 accounted for 28% of work-related burns. Five of these burns were the result of cooking liquids; two were from steam and another two were from hot oil. Cooking grease, a hot machine, hot tap water, hot wax and hot food were each responsible for one work-related scald burn in 2003.

Flame burns accounted for nine, or 18%, of these work-related burns. Three victims received their flame burn injuries from welding accidents and two from ignitable liquids. Hot metal, a medical accident in the form of the victim having a seizure and falling into a fire, a gas stove and a gas barbeque each caused one work-related flame burn injury in 2003.

Electrical burns caused five, or 10%, of work-related burn injuries in 2003. Four were from electrocutions and two were from unspecified electrical accidents.



Four (4), or 8%, of the work-related burn injuries were from contact with hot objects. Touching a chemical, a stove, an oven and a hot machine were each responsible for one of these injuries.

Two (2), or 4%, of the work-related burn injuries were from fires. Gasoline and a gas stove were each responsible for one of these injuries.

One (1), or 2%, of work-related burn injuries in 2003 was a chemical burn.

2 Work-Related Injuries Were Life Threatening

- On August 14, 2003, a 54-year old male automotive worker was burned in an explosion. The victim was driving a forklift on the floor of the General Motors plant. A furnace exploded and threw him off of the forklift and onto molten aluminum. He received burn injuries to over 30% of his body surface area.

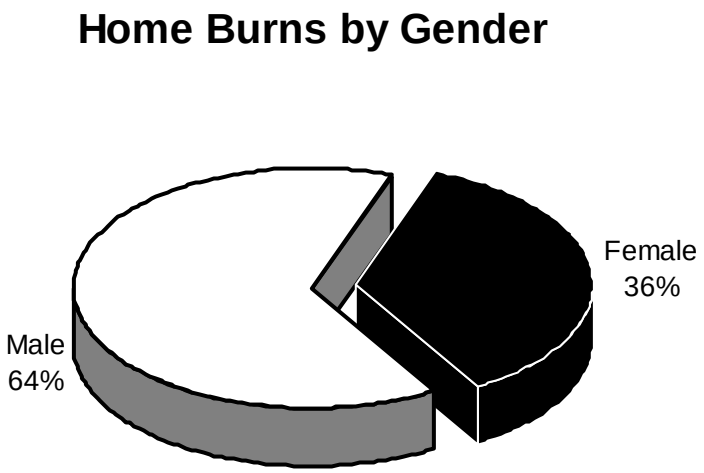
- On November 14, 2003, a 53-year old male electrical worker was electrocuted. The electricity entered him through his hands and exited through his feet. It was estimated that 2,300 volts went through his body.

Program to Reduce Scalds to Restaurant Kitchen Workers

In an effort to protect workers, often teenagers, who are burned working in restaurant kitchens, the Department of Fire Services and the Mass. Department of Public Health have collaborated with the Mass. Restaurant Association to develop a poster on first aid for burns in restaurants. The Massachusetts Restaurant Association will ask members to put these posters in their kitchens.

Burn Injuries In the Home

2/3 of Burn Injuries Occur In the Home
The home is the most common place for burn injuries to occur. In 2003, 270 people, almost two-thirds (65%), of all the reported burn injuries took place in the victim's home or surrounding yard. Men were much more likely to be burned at home than women. One hundred and seventy (170) men, 64%, and 97 women, 36%, were burned in their homes in 2003.



44% of All Home Burns Are Scalds
One hundred and eighteen (118), or 44%, of the burn injuries that occurred in the home in 2003 were scalds. Scalds from hot beverages accounted for 38, or 14%, of these burns; cooking liquids caused 31, or 11%; hot tap water caused 27, or 10%; hot food caused 11, or 4% of these burns; cooking grease accounted for three, or 1%; clothes irons and oil each accounted for two, or 1%; and an unspecified cooking act, an act of domestic violence, wax and an unspecified scald injury each caused one, or less than 1% of the home burn injuries in 2003.

Burn injuries from fires were the second leading cause of at home burns in 2003. Forty-six (46) house fires accounted for 17% of all home burn injuries. Many of these fires were caused by smoking, electrical problems and candles. There were 10 (4%) reported camp or bon fires in the victim's yards that resulted in burn injuries. The majority of these fires (60%) involved gasoline. Six (6) brush fires accounted for 2% of all home burn injuries. Two (33%) of these brush fires in people's back yards also involved gasoline. There was also an unspecified fire accounting for less than 1% of these fires; it also involved gasoline.

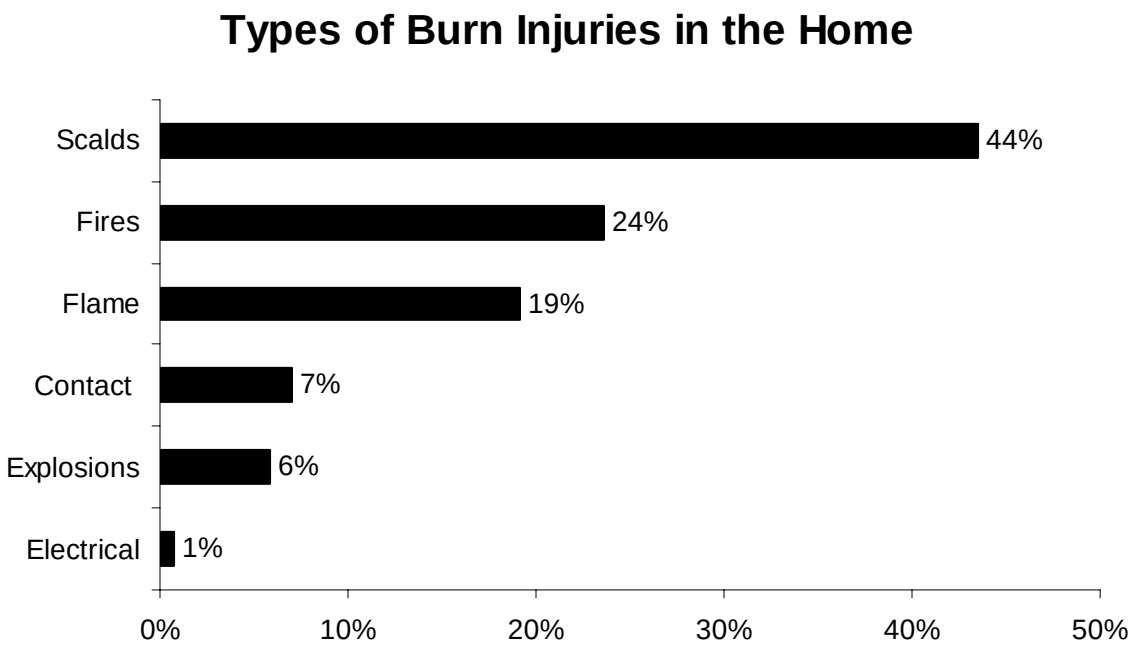
Flame burns accounted for 52, or 19%, of all home-related burn injuries. Clothing ignitions while cooking caused seven, or 3%, of all home-related burns. Ignitable liquids were responsible

for five, or 2%; children playing with gasoline caused four, or 1%. Cooking liquids, self-immolation, smoking in bed, stoves and welding were each responsible for three, or 1% of these injuries. Fireworks, gasoline, lighters and clothing ignitions while smoking each caused two, or 1% of these injuries. Alcohol, an assault, a candle, a clothing ignition from a candle, a clothing ignition from a child playing with a lighter, drugs, explosives, flammable materials, a heater, a clothing ignition from matches, a portable heater, an unspecified smoking act and a woodstove were each responsible for one, or less than 1% of flame burn injuries in homes in 2003.

Contact burn injuries accounted for 19, or 7%, of all the burn injuries that occurred in homes. Hot wax was the leading reason for contact burn injuries, causing three, or 1%, of all the home-related burn injuries in 2003. Clothes irons, heaters, radiators and stoves were each responsible for two, or 1% of these burns. A candle, a car part, an unspecified cooking act, a machine, a motorcycle, a pipe, a portable heater and a woodstove each caused one, or less than 1%, of the reported contact burn injuries that occurred in homes in 2003.

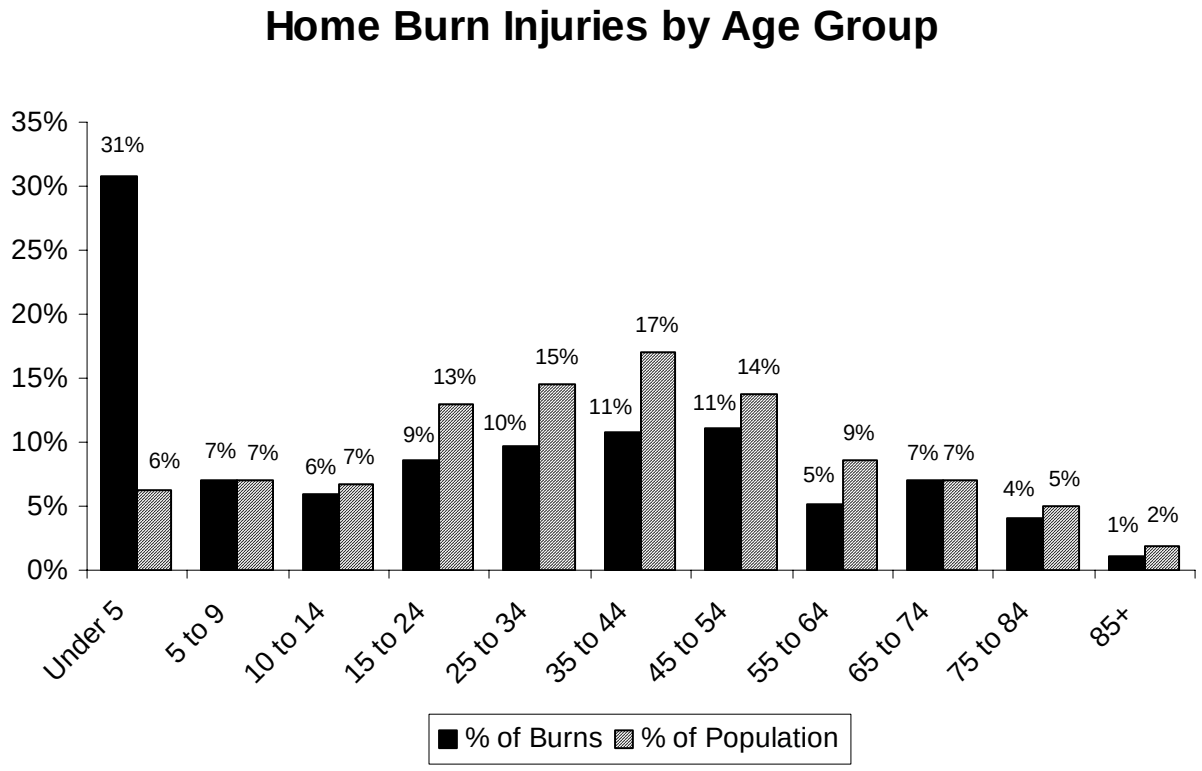
Explosions caused 16, or 6%, of all reported home burn injuries in 2003. Propane was responsible for three, or 1%, of these injuries. Cans of aerosol and smoking on home oxygen each caused two, or 1%, of the home-related burn injuries. Alcohol, an arson, a gas barbeque, a car part, a child playing with gasoline, an unspecified electrical problem, flammables, an ignitable liquid, and an unspecified smoking act was each involved in one, or less than 1%, of the 2003 home burn injuries from explosions.

Two (2) unspecified electrical accidents were responsible for 1% of the reported home burn injuries in 2003.



Almost 1/3 of Home Burns Were to Children Under 5
Thirty-one percent (31%) of the 270 victims that received their burns at home of known age were less than five years of age. Children under five years old were 5 times more likely to be burned at home. Children between the ages of five and nine received 7% of the home burns while children aged 10 to 14 accounted for 6% of these injuries. Young adults between the ages of 15 and 24 were responsible for 9% of these burns; 10% were between 25 and 34; 11% were between 35 and 44; another 11% were between 45 and 54; 5% were between 55 and 64; 7% were between 65 and 74; 4% were between 75 and 84; and 1% were over the age of 85-years old.

The youngest victim to receive an at home burn injury was a one-month old boy who received a contact burn to his left hand when he touched a radiator. The oldest victim to receive a burn at home was a 90-year old woman whose home caught on fire from a portable heater. She received burns to her face and hands.



5% of Home Burns Resulted in Death
Fourteen (14), or 5%, of the 270 reported burn injuries that occurred in homes in 2003 resulted in death for the victim. Eight (8), or 57% of these deaths, were male; and six, or 43%, were female. The youngest victim to die from burns she received at home was a 12-year old girl who received burns to 98% of her body in a house fire. The oldest victim to succumb to her injuries was a 90-year old woman who received burns to her face and hands in her house fire. Eight (8), or 57%, of the victims received their injuries in house fires; four, or 29%, received their injuries through flame burns. An explosion and a hot tap water scald burn (90% BSA) were each responsible for 7% of the home burn injury deaths in 2003.

Burn Injury Reports by Hospital

Forty-nine (49) out of the 97 acute care health care facilities in Massachusetts submitted a total of 465 burn injury reports for 416 victims to the Massachusetts Burn Injury Reporting System (M-BIRS). Some individuals were treated at more than one hospital, resulting in more burn reports than total victims. For information on the number of burn reports submitted by each hospital, please refer to the table *Number of Reported Burn Injuries Per Hospital* in the Appendix.

Law Requires Hospitals to Report Burn Injuries Over 5% of the Body
Massachusetts General Law (MGL) Chapter 112, Section 12A requires all physicians and medical treatment facilities to immediately report treatment of every burn injury extending to 5% or more of a person's body surface area to the State Fire Marshal and to the police department in the community in which the burn occurred.

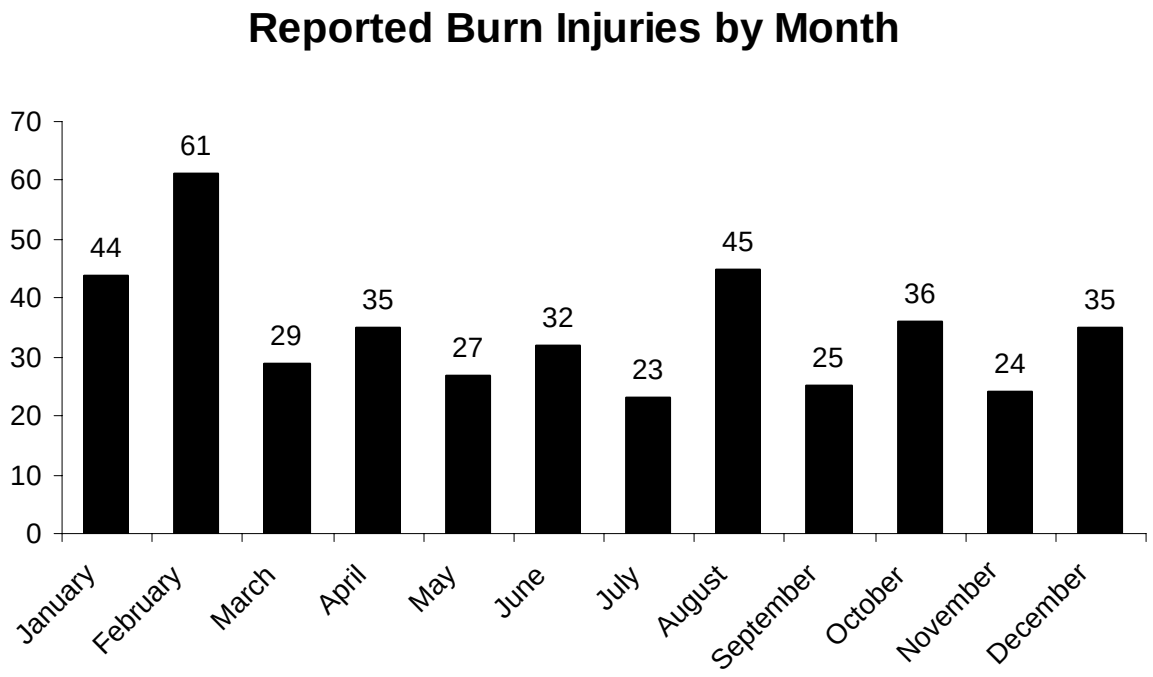
Hospitals May Fax Reports or Call and Submit Written Report
Health care facilities now have a choice about how to report burn injuries. If they choose to do so, health care providers may now fax their burn injury reports to the State Fire Marshal at the Department of Fire Services, (978) 567-3199. A completed transmission will satisfy both the telephone and written notification provisions of the law. Hospitals not opting for the fax report method must report burn injuries by telephone at (800) 475-3443 and submit a written report.

Although M-BIRS was instituted under the Department of Public Safety in June of 1984, Massachusetts hospitals have been required to report burn injuries to a government agency since 1973. M-BIRS, along with the Office of the State Fire Marshal, was carried over to the newly created Department of Fire Services in 1996. It remains a joint program of the Department of Fire Services and the Massachusetts Department of Public Health.

M-BIRS Has Two Main Purposes — Identifying Arsonists and Burn Prevention
Data collected by the Massachusetts Burn Injury Reporting System is used in several ways. Investigators use the data to determine if an arsonist was treated for a burn that resulted from an attempt to illegally burn a building or vehicle. If these burns are not reported promptly, arsonists may continue to light fires that threaten life and property. Our data has also been used to identify problems that need to be addressed by public education or regulation and to develop appropriate strategies to deal with these problems. We need to know what type of activity injures whom, if the injuries are seasonal, and how old the victims are, to develop and implement effective prevention programs. We appreciate the efforts of the many dedicated doctors, nurses and clerical personnel who report the burn injuries promptly and completely. They make the program work.

Burn Injuries by Month

Average of 35 Burns a Month
An average of 35 burns was reported during each month of 2003, from a low of 23 in July to a high of 61 in February[4]. This average is up from 31 burns per month in 2001 and 30 burns in 2000 but still down from 39 burns per month in 1999 and 38 burns per month in 1998. It is also still below the 10-year (1994-2003) average of 37 burns per month.



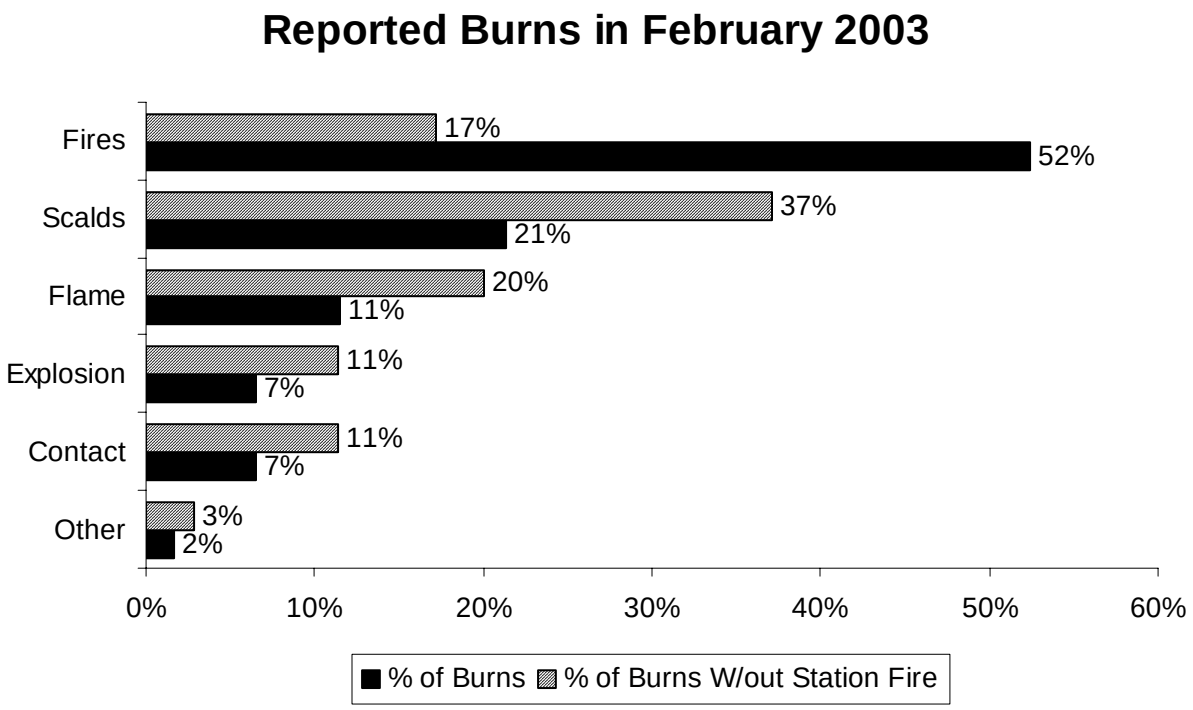
Scalds caused the most burn injuries during eight months of the year. In July, burns from fires and scalds tied for the most burns injuries. In February, April, June and August burns from fires caused the most injuries. Spilled hot beverages, cooking liquids, hot tap water, cooking grease, steam were the leading causes.

February Peak Month for Burns
February was the peak month for burns in 2003. Burns from fires were the leading cause of burn injuries in February. These burns accounted for 32, or 52% of the burns in February, 2003. Twenty-six (26), or 43%, of these were victims from the fire at The Station nightclub in West Warwick, RI. If we exclude them from our calculations, then August was once again the month with the most reported burns – 45, with January right behind it with 44 reported burns. The average burns per month also decreases to 33 without these victims included in our count. Six (6) house fires accounted for another 10% of the February burn injuries. Scalds accounted for 13, or 21%, of these burns. Burns from hot beverages caused five, or 8%. Flame burn injuries

[4] February includes the 26 victims of The Station nightclub fire in West Warwick, RI that were treated at MA Hospitals.

represented 12% of February's burn injuries. There were four explosion burn injuries in February accounting for 7% of the total burn injuries. Another four of February's burns, or 7% were caused by contact with hot objects. There was also one chemical burn, resulting in 2% of these injuries in February 2003 in Massachusetts.

The following chart indicates the leading causes of burn injuries reported in February, 2003. Twenty-six (26) of the 32 burns from fires in February, where victims of The Station nightclub fire in West Warwick, RI that were treated in Massachusetts hospitals.

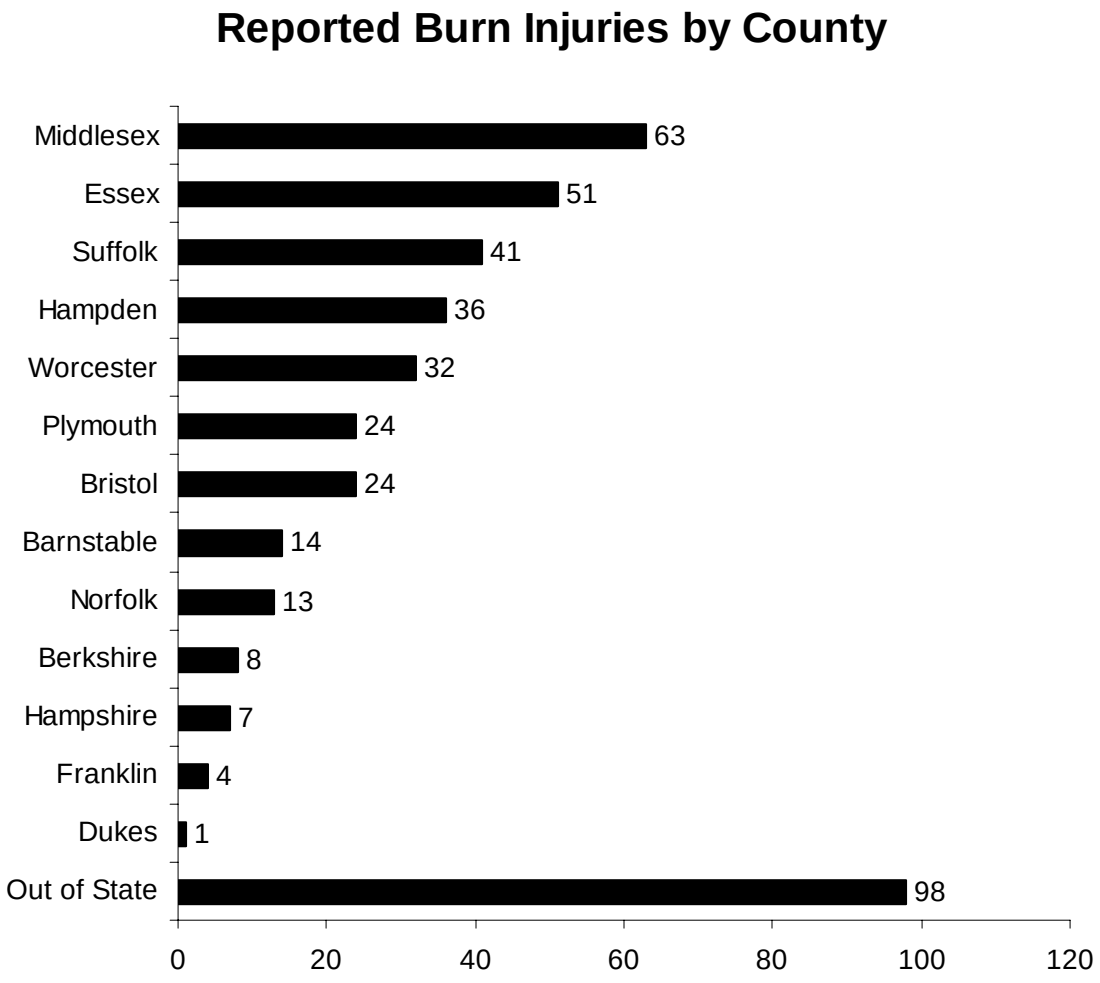


For more information, please refer to the table *Causes of Burn Injuries by Month* in the Appendix.

Geographical Demographics

Massachusetts Burn Victims from 130 Cities and Towns
Massachusetts medical facilities treated 318 residents of 124 Massachusetts cities and towns. Burn victims came from every county in the Commonwealth. The largest numbers of reported burn injuries were incurred by residents of Middlesex, Essex, and Suffolk counties. It appears that some large Boston hospitals (Suffolk County) may have under reported the burns they treated.

Ninety-eight (98) burn victims from out-of state-received treatment at Massachusetts facilities. Some of the people were injured while vacationing here; others came to Massachusetts specifically for the specialized treatment of burn injuries that is available in the Commonwealth.



For information on the number of burn victims from each Massachusetts community, please refer to the table *Burn Injuries by Victim's Community* in the Appendix.

2003 Appendix

* Italicized names are sub-categories for the headings listed above them.

Specific Causes of Burn Injuries

Cause	# of Burns	% of Burns
Scalds	**149**	**35.8%**
Cooking	56	13.5%
Cooking Liquids	*39*	*9.4%*
Food	*12*	*2.9%*
Cooking Grease	*4*	*1.0%*
Cooking (Unspec.)	*1*	*0.2%*
Hot Beverages	45	10.8%
Hot Tap Water	33	7.9%
Oil	4	1.0%
Steam	2	0.5%
Clothes Iron	2	0.5%
Unspecified	2	0.5%
Car	1	0.2%
Car Part	1	0.2%
Domestic Violence	1	0.2%
Machine	1	0.2%
Wax	1	0.2%
Fires	**119**	**28.6%**
House Fires	53	12.7%
House Fire	*22*	*5.3%*
Smoking	*13*	*3.1%*
Electrical	*3*	*0.7%*
Alcohol	*2*	*0.5%*
Candle	*2*	*0.5%*
Explosives	*2*	*0.5%*
Appliance	*1*	*0.2%*
Arson	*1*	*0.2%*
Child w/Gasoline	*1*	*0.2%*
Child w/Matches	*1*	*0.2%*
Gasoline	*1*	*0.2%*
Portable Heater	*1*	*0.2%*
Self-Immolation	*1*	*0.2%*
Stove	*1*	*0.2%*
Woodstove	*1*	*0.2%*
Structure Fire	27	6.5%
The Station Fire	*26*	*6.3%*
Flammables	*1*	*0.2%*
Camp or Bon Fires	22	5.3%
Gasoline	*11*	*2.6%*
Bon Fire	*6*	*1.4%*

Cause	# of Burns	% of Burns
Fires (con't)		
Campfire	*3*	*0.7%*
Flashburn	*1*	*0.2%*
Ignitable Liquids	*1*	*0.2%*
Motor Vehicle Fires	7	1.7%
Airplane Crash	*2*	*0.5%*
Boat Fire	*2*	*0.5%*
Gasoline	*2*	*0.5%*
Self-Immolation	*1*	*0.2%*
Brush Fires	7	1.7%
Brush fire	*5*	*1.2%*
Gasoline	*2*	*0.5%*
Fires/Not Specified	3	0.7%
Cooking Liquids	*1*	*0.2%*
Explosives	*1*	*0.2%*
Gasoline	*1*	*0.2%*
Flame Burns	**75**	**18.0%**
Ignitable Liquids	18	4.3%
Ignitable Liquids	*8*	*1.9%*
Child w/Gasoline	*6*	*1.4%*
Gasoline (Unspec.)	*4*	*1.0%*
Cooking	16	3.8%
Cooking/Clothes	*7*	*1.7%*
Stove	*4*	*1.0%*
Cooking Liquids	*3*	*0.7%*
Barbeque (Charcoal)	*1*	*0.2%*
Barbeque (Gas)	*1*	*0.2%*
Smoking	13	3.1%
Smoking/Clothes	*3*	*0.7%*
Smoking in Bed	*3*	*0.7%*
Child w/Lighter	*3*	*0.7%*
Lighter	*2*	*0.5%*
Matches/Clothes	*1*	*0.2%*
Smoking (Unspec.)	*1*	*0.2%*
Welding	5	1.2%
Heater	4	1.0%
Portable Heater	*2*	*0.5%*
Heater	*1*	*0.2%*
Woodstove	*1*	*0.2%*
Self-Immolation	4	1.0%

Cause	# of Burns	% of Burns
Flame Burns (Con't)		
Assault	3	0.7%
Explosives	3	0.7%
Fireworks	*2*	*0.5%*
Explosives	*1*	*0.2%*
Candle	2	0.5%
Candle/Clothes	*1*	*0.2%*
Candle	*1*	*0.2%*
Propane	2	0.5%
Alcohol	1	0.2%
Illegal Drugs	1	0.2%
Flammable Materials	1	0.2%
Medical (Seizure)	1	0.2%
Metal	1	0.2%
Explosions	**36**	**8.7%**
Propane	5	1.2%
Flammables	5	1.2%
Smoking	5	1.2%
Cigarette	*2*	*0.5%*
Smoking on Oxygen	*2*	*0.5%*
Smoking (Unspecified)	*1*	*0.3%*
Ignitable Liquids	4	1.0%
Ignitable Liquids	*3*	*0.7%*
Child w/Gasoline	*1*	*0.2%*
Cooking	3	0.7%
Cooking Liquids	*2*	*0.5%*
Barbeque (Gas)	*1*	*0.2%*
Aerosol Can	2	0.5%
Car Part	2	0.5%
Chemical	2	0.5%
Cutting Torch	2	0.5%
Alcohol	1	0.2%
Arson	1	0.2%
Car Radiator	1	0.2%
Electrical	1	0.2%
Metal	1	0.3%
Motorcycle	1	0.3%

Cause	# of Burns	% of Burns
Contact Burns	**25**	**6.0%**
Cooking	5	1.2%
Stove	*3*	*0.7%*
Cooking (Unspecified)	*1*	*0.2%*
Oven	*1*	*0.2%*
Wax	3	0.7%
Asphalt	2	0.5%
Clothes Iron	2	0.5%
Heater	2	0.5%
Radiator	2	0.5%
Candle	1	0.2%
Car Part	1	0.2%
Chemical	1	0.2%
Motorcycle	1	0.2%
Pipe	1	0.2%
Portable Heater	1	0.2%
Woodstove	1	0.2%
Electrical	**7**	**1.7%**
Unspecified	4	1.0%
Electrocution	3	0.7%
Other Burn Injuries	**5**	**1.2%**
Chemical	3	0.7%
Bomb Making	*1*	*0.2%*
Sunburn	2	0.5%

Causes of Burn Injuries by Age

UNDER 5	94	22.6%
Cause	**# of Burns**	**% By Age**
Scalds	**75**	**79.8%**
Beverages	33	35.1%
Hot Tap Water	21	22.3%
Cooking	16	17.0%
Cooking Liquids	*8*	*8.5%*
Hot Food	*8*	*8.5%*
Clothes Iron	2	2.1%
Unspecified	2	2.1%
Oil	1	1.1%
Contact	**7**	**7.4%**
Clothes Iron	2	2.1%
Heater	2	2.1%
Pipe	1	1.1%
Radiator	1	1.1%
Stove	1	1.1%
Fire	**6**	**6.4%**
House Fires	3	3.2%
House Fire	*2*	*2.1%*
Child w/Matches	*1*	*1.1%*
Camp or Bonfires	2	2.1%
Brush Fires	1	1.1%
Flame	**4**	**4.3%**
Child/Lighter/Clothes	1	1.1%
Cooking/Clothes	1	1.1%
Heater	1	1.1%
Ignitable Liquids	1	1.1%
Explosion	**2**	**2.1%**
Electrical	1	1.1%
Propane	1	1.1%

AGES 5 TO 9	21	5.0%
Cause	**# of Burns**	**% By Age**
Scalds	**13**	**61.9%**
Cooking	7	33.3%
Cooking Liquids	*3*	*14.3%*
Hot Food	*3*	*14.3%*
Cooking Grease	*1*	*4.8%*
Beverages	5	23.8%
Hot Tap Water	1	4.8%
Flame	**4**	**19.0%**
Candle/Clothing	1	4.8%
Child/Lighter/Clothes	1	4.8%
Fireworks	1	4.8%
Portable Heater	1	4.8%
Fires	**2**	**9.5%**
House Fires	2	9.5%
Contact	**1**	**4.8%**
Motorcycle	1	4.8%
Explosion	**1**	**4.8%**
Child w/Gasoline	1	4.8%

AGES 10 TO 14	**22**	**5.3%**
Cause	**# of Burns**	**% By Age**
Explosion	**6**	**27.3%**
Aerosol can	2	9.1%
Barbeque (Gas)	1	4.5%
Flammables	1	4.5%
Ignitable Liquids	1	4.5%
Propane	1	4.5%
Fire	**5**	**22.7%**
House Fire	3	13.6%
House Fire	*3*	*13.6%*
Camp or Bon Fires	2	9.1%
Bon Fire	*1*	*4.5%*
Camp Fire	*1*	*4.5%*
Flame	**4**	**18.2%**
Children Playing	4	18.2%
Child w/Gasoline	*3*	*13.6%*
Child w/Lighter	*1*	*4.5%*
Scalds	**3**	**13.6%**
Cooking Liquids	3	13.6%
Contact Burns	**2**	**9.1%**
Asphalt	1	4.5%
Wax	1	4.5%
Electrical	**1**	**4.5%**
Unspecified	1	4.5%
Other	**1**	**4.5%**
Sunburn	1	4.5%

AGES 15 TO 24	**60**	**14.4%**
Cause	**# of Burns**	**% By Age**
Fire	**26**	**43.3%**
Camp or Bon Fire	10	16.7%
Child w/Gasoline	*3*	*5.0%*
Bon Fire	*2*	*3.3%*
Camp Fire	*2*	*3.3%*
Gasoline	*2*	*3.3%*
Flashburn	*1*	*3.3%*
House Fire	9	15.0%
Alcohol	*2*	*3.3%*
Explosives	*2*	*3.3%*
Candle	*1*	*1.7%*
Child w/Gasoline	*1*	*1.7%*
House Fire	*1*	*1.7%*
Stove	*1*	*1.7%*
Woodstove	*1*	*1.7%*
Structure Fire	2	3.3%
The Station Fire	*2*	*3.3%*
Vehicle Fires	2	3.3%
Boat Fire	*1*	*1.7%*
Gasoline	*1*	*1.7%*
Fire (Unspecified)	2	3.3%
Explosives	*1*	*1.7%*
Gasoline	*1*	*1.7%*
Brush Fires	1	1.7%
Flame	**12**	**20.0%**
Child w/Gasoline	3	5.0%
Ignitable Liquids	3	5.0%
Assault	2	3.3%
Explosives	1	1.7%
Fireworks	1	1.7%

Cause	**# of Burns**	**% By Age**
Flame (con't)		
Medical (Seizure)	1	1.7%
Metal	1	1.7%
Scalds	**11**	**18.3%**
Cooking	7	11.7%
Cooking Liquids	*6*	*10.0%*
Food	*1*	*1.7%*
Car	1	1.7%
Car Radiator	1	1.7%
Hot Tap Water	1	1.7%
Wax	1	1.7%
Explosion	**5**	**8.3%**
Cigarette	1	1.7%
Cooking Liquids	1	1.7%
Flammables	1	1.7%
Motorcycle	1	1.7%
Propane	1	1.7%
Contact	**4**	**6.7%**
Asphalt	1	1.7%
Candle	1	1.7%
Stove	1	1.7%
Woodstove	1	1.7%
Other	**1**	**1.7%**
Chemical	1	1.7%
Bomb Making	*1*	*1.7%*

AGES 25 TO 34	**59**	**14.2%**
Cause	**# of Burns**	**% By Age**
Fire	**26**	**44.1%**
Structure Fires	15	25.4%
The Station Fire	*15*	*25.4%*
House Fires	7	11.9%
House Fires	*4*	*6.8%*
Appliance	*1*	*1.7%*
Arson	*1*	*1.7%*
Electrical	*1*	*1.7%*
Brush Fires	2	3.4%
Brush Fire	*1*	*1.7%*
Gasoline	*1*	*1.7%*
Camp or Bon Fire	2	3.4%
Bon Fire	*1*	*1.7%*
Gasoline	*1*	*1.7%*
Scalds	**11**	**18.6%**
Cooking	6	10.2%
Cooking Liquids	*5*	*8.5%*
Cooking Grease	*1*	*1.7%*
Hot Tap Water	3	5.1%
Beverages	1	1.7%
Oil	1	1.7%
Flame	**11**	**18.6%**
Cooking	3	5.1%
Cooking/Clothes	*1*	*1.7%*
Cooking Liquids	*1*	*1.7%*
Stove	*1*	*1.7%*
Ignitable Liquids	2	3.4%
Alcohol	1	1.7%
Assault	1	1.7%
Barbeque (Gas)	1	1.7%
Illegal Drugs	1	1.7%
Flammable Materials	1	1.7%
Smoking in Bed	1	1.7%

Cause	**# of Burns**	**% By Age**
Explosions	**6**	**10.2%**
Flammable Material	2	3.4%
Alcohol	1	1.7%
Car Part	1	1.7%
Cigarette	1	1.7%
Ignitable Materials	1	1.7%
Contact Burns	**3**	**5.1%**
Car part	1	1.7%
Cooking, unspecified	1	1.7%
Wax	1	1.7%
Electrical	**1**	**1.7%**
Unspecified	1	1.7%
Other	**1**	**1.7%**
Chemical	1	1.7%

AGES 35 TO 44	**58**	**13.9%**
Cause	**# of Burns**	**% By Age**
Fire	**22**	**37.9%**
Structure Fires	10	17.2%
The Station Fire	*9*	*15.3%*
Flammables	*1*	*1.7%*
House Fires	6	10.3%
Smoking	*3*	*5.2%*
Candle	*1*	*1.7%*
Fire Control	*1*	*1.7%*
House Fire	*1*	*1.7%*
Camp or Bon Fires	4	6.9%
Gasoline	*4*	*6.9%*
Brush Fires	1	1.7%
Brush Fire	*1*	*1.7%*
Scalds	**13**	**22.4%**
Cooking	6	10.3%
Cooking Liquids	*4*	*6.9%*
Cooking Grease	*1*	*1.7%*
Cooking (Unspec.)	*1*	*1.7%*
Beverages	3	5.2%
Hot Tap Water	2	3.4%
Oil	1	1.7%
Steam	1	1.7%
Flame	**10**	**17.2%**
Gasoline	2	3.4%
Smoking	2	3.4%
Smoking/Clothes	*1*	*1.7%*
Smoking in Bed	*1*	*1.7%*
Stove	2	3.4%
Ignitable Liquids	1	1.7%
Propane	1	1.7%
Self-immolation	1	1.7%
Welding	1	1.7%

Cause	**# of Burns**	**% By Age**
Explosions	**7**	**12.1%**
Chemical	2	3.4%
Arson	2	1.7%
Car Part	1	1.7%
Cooking Liquids	1	1.7%
Ignitable Liquids	1	1.7%
Propane	1	1.7%
Contact	**3**	**5.2%**
Chemical	1	1.7%
Machine	1	1.7%
Oven	1	1.7%
Other	**2**	**3.4%**
Chemical	1	1.7%
Sunburn	1	1.7%
Electrical	**1**	**1.7%**
Electrocution	1	1.7%

AGES 45 TO 54	**45**	**10.8%**
Cause	**# of Burns**	**% By Age**
Fire	**14**	**31.1%**
House Fires	9	20.0%
Smoking	*5*	*11.1%*
House Fire	*3*	*6.7%*
Self-Immolation	*1*	*2.2%*
Camp or Bon Fires	2	4.4%
Gasoline	*1*	*2.2%*
Ignitable Liquids	*1*	*2.2%*
Vehicle Fires	2	4.4%
Boat Fire	*1*	*2.2%*
Gasoline	*1*	*2.2%*
Fire (Unspecified)	1	2.2%
Cooking Liquids	*1*	*2.7%*
Flame	**13**	**28.9%**
Cooking	3	6.7%
Barbeque (Gas)	*1*	*2.2%*
Cooking/Clothes	*1*	*2.2%*
Cooking Liquids	*1*	*2.2%*
Welding	3	6.7%
Self-Immolation	2	4.4%
Candle	1	2.2%
Gasoline	1	2.2%
Ignitable Liquids	1	2.2%
Propane	1	2.2%
Woodstove	1	2.2%
Scalds	**11**	**24.4%**
Cooking	7	15.6%
Cooking Liquids	*6*	*13.3%*
Cooking Grease	*1*	*2.2%*
Beverages	2	4.4%
Domestic Violence	1	2.2%
Hot Tap Water	1	2.2%
Electrical	**3**	**6.7%**
Electrocution	2	4.4%
Unspecified	1	2.2%
Explosions	**3**	**6.7%**
Car Radiator	1	2.2%
Metal	1	2.2%
Smoking	1	2.2%
Contact	**1**	**2.2%**
Machine	1	2.2%

AGES 55 TO 64	**23**	**5.5%**
Cause	**# of Burns**	**% By Age**
Flame	**8**	**34.8%**
Smoking	3	13.0%
Matches/Clothes	*1*	*4.3%*
Smoking/Clothes	*1*	*4.3%*
Smoking in Bed	*1*	*4.3%*
Cooking	2	8.7%
Cooking/Clothes	*1*	*4.3%*
Cooking Liquids	*1*	*4.3%*
Gasoline	1	4.3%
Self-Immolation	1	4.3%
Welding	1	4.3%
Scalds	**6**	**26.1%**
Cooking Grease	2	8.7%
Beverages	1	4.3%
Machine	1	4.3%
Oil	1	4.3%
Steam	1	4.3%
Fires	**6**	**26.1%**
House Fires	5	21.7%
Smoking (Unspec.)	*3*	*13.0%*
Electrical	*1*	*4.3%*
House Fire	*1*	*4.3%*
Vehicle Fires	1	4.3%
Airplane Crash	*1*	*4.3%*
Explosion	**2**	**8.7%**
Cutting Torch	2	8.7%
Contact	**1**	**4.3%**
Wax	1	4.3%

AGES 65 TO 74	**19**	**4.6%**
Cause	**# of Burns**	**% By Age**
Flame	**6**	**31.6%**
Smoking	3	15.8%
Lighter	*2*	*10.5%*
Smoking/Clothes	*1*	*5.3%*
Cooking/Clothes	2	10.5%
Portable Heater	1	5.3%
Fire	**5**	**26.3%**
Brush Fires	2	10.5%
Brush Fire	*1*	*5.3%*
Gasoline	*1*	*5.3*
House Fires	2	10.5%
Smoking	*2*	*10.5%*
Vehicle Fires	1	5.3%
Airplane Crash	*1*	*5.3%*
Scalds	**4**	**21.1%**
Cooking Liquids	2	10.5%
Hot Tap Water	2	10.5%
Contact	**2**	**10.5%**
Portable Heater	1	5.3%
Radiator	1	5.3%
Explosion	**2**	**10.5%**
Flammables	1	5.3%
Smoking on Oxygen	1	5.3%

AGES 75 TO 84	**11**	**2.6%**
Cause	**# of Burns**	**% By Age**
Fire	**5**	**45.5%**
House Fires	5	45.5%
House Fire	*4*	*36.4%*
Electrical	*1*	*9.1%*
Flame	**3**	27.3**%**
Cooking	2	18.2%
Cooking/Clothes	*1*	*9.1%*
Stove	*1*	*9.1%*
Smoking (Unspec.)	1	9.1%
Contact	**1**	**9.1%**
Stove	1	9.1%
Explosion	**1**	**9.1%**
Smoking on Oxygen	1	9.1%
Scalds	**1**	**9.1%**
Hot Tap Water	1	9.1%

AGES 85+	**3**	**0.7%**
Cause	**# of Burns**	**% By Age**
Fire	**2**	**66.7%**
House Fires	2	66.7%
House Fire	*1*	*33.3%*
Portable Heater	*1*	*33.3%*
Scalds	**1**	**33.3%**
Hot Tap Water	1	33.3%

Causes of Work-Related Burns

Cause	# of Burns	% of Total
Explosion	**15**	**30%**
Propane	3	6%
Ignitable Liquids	2	4%
Flammable Material	2	4%
Cigarette	2	4%
Chemical	2	4%
Cutting Torch	2	4%
Metal	1	2%
Flammables	1	2%
Scalds	**14**	**28%**
Cooking	7	14%
Cooking Liquids	*5*	*10%*
Cooking Grease	*1*	*2%*
Hot Food	*1*	*2%*
Steam	2	4%
Oil	2	4%
Machine	1	2%
Hot Tap Water	1	2%
Wax	1	2%
Flame	**9**	**18%**
Welding	3	6%
Ignitable Liquids	2	4%
Barbeque (Gas)	1	2%
Metal	1	2%
Medical (Seizure)	1	2%
Gas Stove	1	2%

Cause	# of Burns	% of Total
Electrical	**5**	**10%**
Electrocution	3	6%
Unspecified	2	4%
Contact	**4**	**8%**
Cooking	2	4%
Oven	*1*	*2%*
Stove	*1*	*2%*
Chemical	1	2%
Machine	1	2%
Fire	**2**	**4%**
House Fires	1	2%
Stove	*1*	*2%*
Vehicle Fires	1	2%
Gasoline	*1*	*2%*
Other	**1**	**2%**
Chemical	1	2%
Total	**50**	**100%**

Number of Reported Burns Per Hospital

Addison Gilbert Hospital	2
Anna Jaques Hospital	2
Athol Memorial Hospital	2
Baystate Medical Center	28
Berkshire Medical Center	4
Boston Medical Center	1
Brigham & Women's Hospital	57
Cape Cod Hospital	9
Charlton Memorial Hospital	3
Clinton Hospital	4
Cooley Dickinson Hospital	2
Emerson Hospital	2
Falmouth Hospital	5
Franklin Medical Center	2
Good Samaritan Medical Center	10
Health Alliance Hospital, Burbank	3
Health Alliance Hospital, Leominster	2
Henry Heywood Hospital	3
Harrington Memorial Hospital	1
Holy Family Hospital	16
Holyoke Hospital	1
Hubbard Regional Hospital	1
Jordan Hospital	3
Lawrence General Hospital	1
Lawrence Memorial Hosp., Medford	1
Lowell General Hospital	2
Martha's Vineyard Hospital	1
Massachusetts General Hospital	118
Merrimack Valley Hospital	2
Metro West Hospital	3
Milford-Whitinsville Hospital	5
Milton Hospital	1
Morton Hospital	3
Nashoba Hospital	1
New England Medical Center	1
North Adams Regional Hospital	4
North Shore Children's Hospital	3
North Shore Medical Center	4
Noble Hospital	1
Norwood Hospital	2
Salem Hospital	1
St. Elizabeth's Hospital	1
St. Luke's Hospital	11
Shriners Burns Hospital	103
South Shore Hospital	2
Sturdy Memorial Medical Center	3
Tobey Hospital	1
UMass Medical Center, University	22
Winchester Hospital	1
Wing Memorial Hospital	1

Causes of Burn Injuries by Month

JANUARY	**44**	**10.6%**
Cause	**# of Burns**	**% By Month**
Scalds	**22**	**50.0%**
Beverages	7	15.9%
Hot Tap Water	7	15.9%
Cooking	6	13.6%
Cooking Liquids	*4*	*9.1%*
Hot Food	*1*	*2.3%*
Cooking Grease	*1*	*2.3%*
Steam	1	2.3%
Unspecified	1	2.3%
Flame	**8**	**18.2%**
Cooking	2	4.5%
Cooking/Clothes	*1*	*2.3%*
Stove	*1*	*2.3%*
Child/Lighter/Clothes	1	2.3%
Illegal Drugs	1	2.3%
Medical (Seizure)	1	2.3%
Woodstove	1	2.3%
Fire	**6**	**13.6%**
House Fires	6	13.6%
House Fire	*3*	*6.8%*
Smoking	*2*	*4.5%*
Candle	*1*	*2.3%*
Contact	**4**	**9.1%**
Heater	1	2.3%
Radiator	1	2.3%
Wax	1	2.3%
Woodstove	1	2.3%
Explosion	**4**	**9.1%**
Cigarette	2	4.5%.
Cutting Torch	2	4.5%

FEBRUARY	**61**	**14.7%**
Cause	**# of Burns**	**% By Month**
Fire	**32**	**52.5%**
Structure Fires	26	42.6%
The Station Fire	*26*	*42.6%*
House Fires	6	9.8%
Smoking	*5*	*8.2%*
Portable Heater	*1*	*1.6%*
Scalds	**13**	**21.3%**
Beverages	5	8.2%
Cooking	5	8.2%
Cooking Grease	*3*	*4.9%*
Cooking Liquids	*1*	*1.6%*
Cooking (Unspec.)	*1*	*1.6%*
Hot Tap Water	3	4.9%
Flame	**7**	**11.5%**
Cooking/Clothes	2	3.3%
Ignitable Liquids	2	3.3%
Lighter	2	3.3%
Welding	1	1.6%
Contact	**4**	**6.6%**
Candle	2	1.6%
Clothes Iron	1	1.6%
Machine	1	1.6%
Portable Heater	1	1.6%
Explosion	**4**	**6.6%**
Propane	2	3.3%
Arson	1	1.6%
Flammables	1	1.6%
Other	**1**	**1.6%**
Chemical	1	1.6%

MARCH	**29**	**7.0%**
Cause	**# of Burns**	**% By Month**
Scalds	**10**	**34.5%**
Cooking	4	13.8%
Cooking Liquids	*3*	*10.3%*
Hot Food	*1*	*3.4%*
Beverages	3	10.3%
Hot Tap Water	1	10.3%
Flame	**8**	**27.6%**
Cooking	3	10.3%
Barbeque (Gas)	*1*	*3.4%*
Cooking/Clothes	*1*	*3.4%*
Stove	*1*	*3.4%*
Smoking	3	10.3%
Smoking/Clothes	*2*	*6.9%*
Match/Clothes	*1*	*3.4%*
Child w/Gasoline	1	3.4%
Welding	1	3.4%
Fire	**7**	**24.1%**
House Fires	5	17.2%
House Fire	*2*	*6.9%*
Arson	*1*	*3.4%*
Electrical	*1*	*3.4%*
Smoking	*1*	*3.4%*
Brush Fires	1	3.4%
Brush Fire	*1*	*3.4%*
Vehicle Fires	1	3.4%
Boat Fire	*1*	*3.4%*
Contact	**1**	**3.4%**
Radiator	1	3.4%
Electrical	**1**	**3.4%**
Unspecified	1	3.4%
Explosion	**1**	**3.4%**
Ignitable Liquids	1	3.4%
Other	**1**	**3.4%**
Sunburn	1	3.4%

APRIL	**35**	**8.4%**
Cause	**# of Burns**	**% By Month**
Fire	**14**	**40.0%**
House Fires	9	25.7%
House Fire	*5*	*14.3%*
Smoking	*2*	*5.7%*
Child w/Matches	*1*	*2.9%*
Electrical	*1*	*2.9%*
Brush Fires	3	8.6%
Gasoline	*2*	*5.7%*
Brush Fire	*1*	*2.9%*
Camp or Bon Fire	2	5.7%
Flashburn	*1*	*2.9%*
Gasoline	*1*	*2.9%*
Scalds	**9**	**25.7%**
Cooking	4	11.4%
Cooking Liquids	*3*	*8.6%*
Hot Food	*1*	*2.9%*
Beverages	2	5.7%
Hot Tap Water	2	5.7%
Steam	1	2.9%
Flame	**6**	**17.1%**
Portable Heater	2	5.7%
Assault	1	2.9%
Cooking Liquids	1	2.9%
Smoking in Bed	1	2.9%
Welding	1	2.9%
Contact	**4**	**11.4%**
Heater	1	2.9%
Machine	1	2.9%
Motorcycle	1	2.9%
Stove	1	2.9%
Electrical	**1**	**2.9%**
Unspecified	1	2.9%
Explosion	**1**	**2.9%**
Cooking Liquids	1	2.9%

MAY	**27**	**6.5%**
Cause	**# of Burns**	**% By Month**
Scalds	**15**	**55.6%**
Beverages	6	20.0%
Cooking	3	11.1%
Cooking Liquids	*2*	*7.4%*
Hot Food	*1*	*3.7%*
Hot Tap Water	2	7.4%
Oil	2	7.4%
Car Radiator	1	3.7%
Unspecified	1	3.7%
Flame	**5**	**18.5%**
Gasoline	2	7.4%
Child w/Gasoline	*1*	*3.7%*
Gasoline	*1*	*3.7%*
Child w/Lighter	1	3.7%
Cooking Liquids	1	3.7%
Ignitable Liquids	1	3.7%
Fire	**4**	**14.8%**
Camp or Bon Fires	2	7.4%
Bon Fire	*1*	*3.7%*
Gasoline	*1*	*3.7%*
House Fires	2	7.4%
Gasoline	*1*	*3.7%*
Woodstove	*1*	*3.7%*
Explosion	**2**	**7.4%**
Barbeque (Gas)	1	3.7%
Flammables	1	3.7%
Electrical	**1**	**3.7%**
Unspecified	1	3.7%

JUNE	**32**	**7.7%**
Cause	**# of Burns**	**% By Month**
Fire	**12**	**37.5%**
House Fires	9	28.1%
House Fire	*7*	*21.9%*
Child w/Gasoline	*1*	*3.1%*
Smoking	*1*	*3.1%*
Brush Fires	1	3.1%
Brush Fire	*1*	*3.1%*
Camp or Bon Fires	1	3.1%
Gasoline	*1*	*3.1%*
Vehicle Fires	1	3.1%
Boat Fire	*1*	*3.1%*
Scalds	**10**	**31.3%**
Cooking Liquids	5	15.6%
Hot Tap Water	3	9.4%
Beverages	1	3.1%
Machine	1	3.1%
Explosion	**6**	**18.8%**
Propane	2	6.3%
Alcohol	1	3.1%
Child w/Gasoline	1	3.1%
Motorcycle	1	3.1%
Smoking on Oxygen	1	3.1%
Flame	**2**	**17.6%**
Child w/Gasoline	1	3.1%
Stove	1	3.1%
Other	**1**	**3.1%**
Sunburn	1	3.1%

JULY	**23**	**5.5%**
Cause	**# of Burns**	**% By Month**
Fire	**7**	**30.4%**
Camp or Bon Fires	5	21.7%
Bon Fire	*2*	*8.7%*
Gasoline	*2*	*8.7%*
Child w/Gasoline	*1*	*4.3%*
Brush Fires	1	4.3%
Brush Fire	*1*	*4.3%*
House Fires	1	4.3%
House Fire	*1*	*4.3%*
Scalds	**7**	**30.4%**
Cooking Liquids	3	13.0%
Beverages	2	8.7%
Hot Tap Water	1	4.3%
Wax	1	4.3%
Flame	**3**	**13.0%**
Child w/Gasoline	1	4.3%
Fireworks	1	4.3%
Ignitable Liquids	1	4.3%
Contact	**2**	**8.7%**
Asphalt	1	4.3%
Car Part	1	4.3%
Explosion	**2**	**8.7%**
Car Part	1	4.3%
Cooking Liquids	1	4.3%
Other	**1**	**4.3%**
Chemical	1	4.3%

AUGUST	**45**	**10.8%**
Cause	**# of Burns**	**% By Month**
Flame	**10**	**31.1%**
Ignitable Liquids	4	8.9%
Gasoline	4	8.9%
Self-Immolation	2	4.4%
Alcohol	1	2.2%
Barbeque (Gas)	1	2.2%
Explosives	1	2.2%
Smoking in Bed	1	2.2%
Fire	**10**	**22.2%**
Camp or Bonfires	5	11.1%
Camp or Bon Fire	*3*	*6.7%*
Gasoline	*1*	*2.2%*
Ignitable Liquids	*1*	*2.2%*
Vehicle Fires	3	6.7%
Gasoline	*2*	*4.4%*
Self-Immolation	*1*	*2.2%*
Brush Fires	1	2.2%
Brush Fire	*1*	*2.2%*
House Fires	1	2.2%
House Fire	*1*	*2.2%*
Scalds	**9**	**20.0%**
Beverages	3	6.7%
Cooking Liquids	2	4.4%
Hot Food	2	4.4%
Hot Tap Water	2	4.4%
Contact	**5**	**11.1%**
Cooking	2	4.4%
Cooking (Unspec.)	*1*	*2.2%*
Stove	*1*	*2.2%*
Wax	2	4.4%
Asphalt	1	2.2%
Explosion	**5**	**11.1%**
Car Part	1	2.2%
Car Radiator	1	2.2%
Chemical	1	2.2%
Flammables	1	2.2%
Metal	1	2.2%
Electrical	**1**	**2.2%**
Electrocution	1	2.2%
Other	**1**	**2.2%**
Chemical	1	2.2%

SEPTEMBER	**25**	**6.0%**
Cause	**# of Burns**	**% By Month**
Scalds	**9**	**36.0%**
Cooking	4	16.0%
Cooking Liquids	*3*	*12.00%*
Hot Food	*1*	*4.0%*
Beverage	3	12.0%
Clothes Iron	1	4.0%
Hot Food	1	4.0%
Fire	**6**	**24.0%**
Camp or Bon Fire	2	8.0%
Child w/Gasoline	*1*	*4.0%*
Gasoline	*1*	*4.0%*
House Fires	2	8.0%
Appliance	*1*	*4.0%*
Self-Immolation	*1*	*4.0%*
Vehicle Fires	1	4.0%
Airplane Crash	*1*	*4.0%*
Flame	**5**	**20.0%**
Candle/Clothes	1	4.0%
Child w/Gasoline	1	4.0%
Metal	1	4.0%
Stove	1	4.0%
Welding	1	4.0%
Explosion	**5**	**20.0%**
Ignitable Liquids	2	8.0%
Electrical	1	4.0%
Propane	1	4.0%
Electrical	**1**	**4.0%**
Electrocution	1	4.0%

OCTOBER	**36**	**8.7%**
Cause	**# of Burns**	**% By Month**
Scalds	**17**	**47.2%**
Cooking	7	19.4%
Cooking Liquids	*4*	*11.1%*
Cooking Grease	*3*	*8.3%*
Beverages	4	11.1%
Hot Tap Water	4	11.1%
Oil	2	5.7%
Fire	**8**	**22.2%**
House Fires	4	11.1%
Electrical	*1*	*2.8%*
Stove	*1*	*2.8%*
House Fire	*7*	*2.8%*
Smoking (Unpec.)	*1*	*2.8%*
Camp or Bon Fires	2	5.7%
Bon Fire	*1*	*2.8%*
Camp Fires	*1*	*2.8%*
Structure Fires	1	2.8%
Flammables	*1*	*2.8%*
Fire (Unspecified)	1	2.8%
Gasoline	*1*	*2.8%*
Flame	**6**	**16.7%**
Smoking	2	5.6%
Smoking/Clothes	*1*	*2.8%*
Smoking (Unspec.)	*1*	*2.8%*
Assault.	1	2.8%
Candle	1	2.8%
Self-Immolation	1	2.8%
Explosion	**4**	**11.1%**
Aerosol Can	2	5.6%
Smoking	2	5.6%
Smoking on Oxygen	*1*	*2.8%*
Smoking (Unspec.)	*1*	*2.8%*
Contact	**1**	**2.8%**
Clothes Iron	1	2.8%

NOVEMBER	**24**	**5.8%**
Cause	**# of Burns**	**% By Month**
Scalds	**14**	**58.3%**
Beverages	6	25.0%
Cooking	4	16.7%
Cooking Liquids	*3*	*12.5%*
Hot Food	*1*	*4.2%*
Hot Tap Water	3	12.5%
Domestic Violence	1	4.2%
Fire	**4**	**16.7%**
Camp or Bon Fires	3	12.5%
Bon Fires	*1*	*4.2%*
Child w/Gasoline	*1*	*4.2%*
Gasoline	*1*	*4.2%*
House Fires	1	4.2%
House Fire	*1*	*4.2%*
Flame	**4**	**16.7%**
Cooking	2	8.3%
Cooking/Clothes	*1*	*4.2%*
Cooking Liquids	*1*	*4.2%*
Child/Lighter/Clothes	1	4.2%
Smoking in Bed	1	4.2%
Electrical	**1**	**4.2%**
Electrocution	1	4.2%
Explosion	**1**	**4.2%**
Chemical	1	4.2%

DECEMBER	**35**	**8.4%**
Cause	**# of Burns**	**% By Month**
Scalds	**14**	**40.0%**
Cooking	7	20.0%
Cooking Liquids	*6*	*17.1%*
Hot Food	*1*	*2.9%*
Beverages	5	8.6%
Hot Tap Water	2	5.7%
Car	1	2.9%
Clothes Iron	1	2.9%
Fire	**9**	**25.7%**
House Fires	7	20.0%
Alcohol	*2*	*5.7%*
Explosives	*2*	*5.7%*
Candle	*1*	*2.9%*
House Fire	*1*	*2.9%*
Smoking in Bed	*1*	*2.9%*
Fire (Unspecified)	2	5.7%
Cooking Liquids	*1*	*2.9%*
Explosives	*1*	*2.9%*
Flame	**7**	**20.0%**
Cooking/Clothes	2	5.7%
Fireworks	1	2.9%
Flammable Materials	1	2.9%
Heater	1	2.9%
Self-Immolation	1	2.9%
Welding	1	2.9%
Contact	**3**	**8.6%**
Chemical	1	2.9%
Pipe	1	2.9%
Stove	1	2.9%
Explosion	**1**	**2.9%**
Flammable Materials	1	2.9%

Burn Injuries by Victim's Community

County	# of Burns
Barnstable	**14**
Barnstable	2
Brewster	3
Falmouth	4
Mashpee	1
Sandwich	1
Yarmouth	3
Berkshire	**8**
North Adams	2
Pittsfield	5
Williamstown	1
Bristol	**24**
Berkley	1
Easton	2
Fairhaven	1
Fall River	2
Mansfield	2
New Bedford	8
Norton	2
Raynham	1
Seekonk	1
Somerset	1
Swansea	2
Taunton	1
Dukes	**1**
Tisbury	1
Essex	**51**
Amesbury	1
Beverly	1
Boxford	1
Essex	1
Georgetown	1
Gloucester	2
Haverhill	5
Lawrence	10
Lynn	11
Lynnfield	1
Manchester	2
Marblehead	1
Methuen	6

County	# of Burns
Essex (con't)	
Peabody	2
Rockport	1
Salem	4
Wenham	1
Franklin	**4**
Charlemont	2
Colrain	1
Deerfield	1
Hampden	**36**
Chester	1
Chicopee	2
Hampden	1
Holyoke	1
Ludlow	1
Palmer	1
Springfield	24
West Springfield	4
Westfield	1
Hampshire	**7**
Belchertown	1
Easthampton	1
Pelham	1
South Hadley	1
Southampton	2
Worthington	1
Middlesex	**63**
Bedford	2
Billerica	3
Cambridge	3
Carlisle	1
Chelmsford	1
Dracut	1
Everett	5
Framingham	2
Groton	1
Holliston	2
Littleton	1
Lowell	4
Malden	6

County	# of Burns
Middlesex	**(con't)**
Marlborough	1
Medford	4
Melrose	2
Natick	2
Newton	5
Pepperell	1
Reading	1
Somerville	6
Tewksbury	1
Wakefield	2
Waltham	2
Watertown	1
Wilmington	2
Woburn	1
Norfolk	**13**
Braintree	1
Brookline	1
Canton	1
Foxborough	1
Medway	1
Needham	1
Quincy	2
Stoughton	2
Wellesley	2
Weymouth	1

County	# of Burns
Plymouth	**24**
Abington	1
Brockton	12
East Bridgewater	1
Hull	1
Kingston	1
Lakeville	1
Marshfield	1
Mattapoisett	1
Plymouth	1
Rockland	1
Wareham	2
Whitman	1
Suffolk	**41**
Boston	36
Revere	5
Worcester	**32**
Ashburnham	1
Blackstone	1
Clinton	3
Fitchburg	2
Gardner	1
Lancaster	1
Leominster	1
Lunenburg	1
Milford	2
Oxford	1
Rutland	1
Southbridge	2
Sterling	1
Webster	1
Westborough	1
Worcester	12