

HOUSEHOLD SAFETY:

# Preventing Burns, Shocks, and Fires



# Overview Of Burns And Scalds Accidents In The Home

FATAL	SEVERE (Hospital-in-patient)	MINOR (A&E visits)	MINOR (GPS Visits)	TOTAL
211	7,765	104,000	250,000	362,000

Key age groups at risk - severe injuries

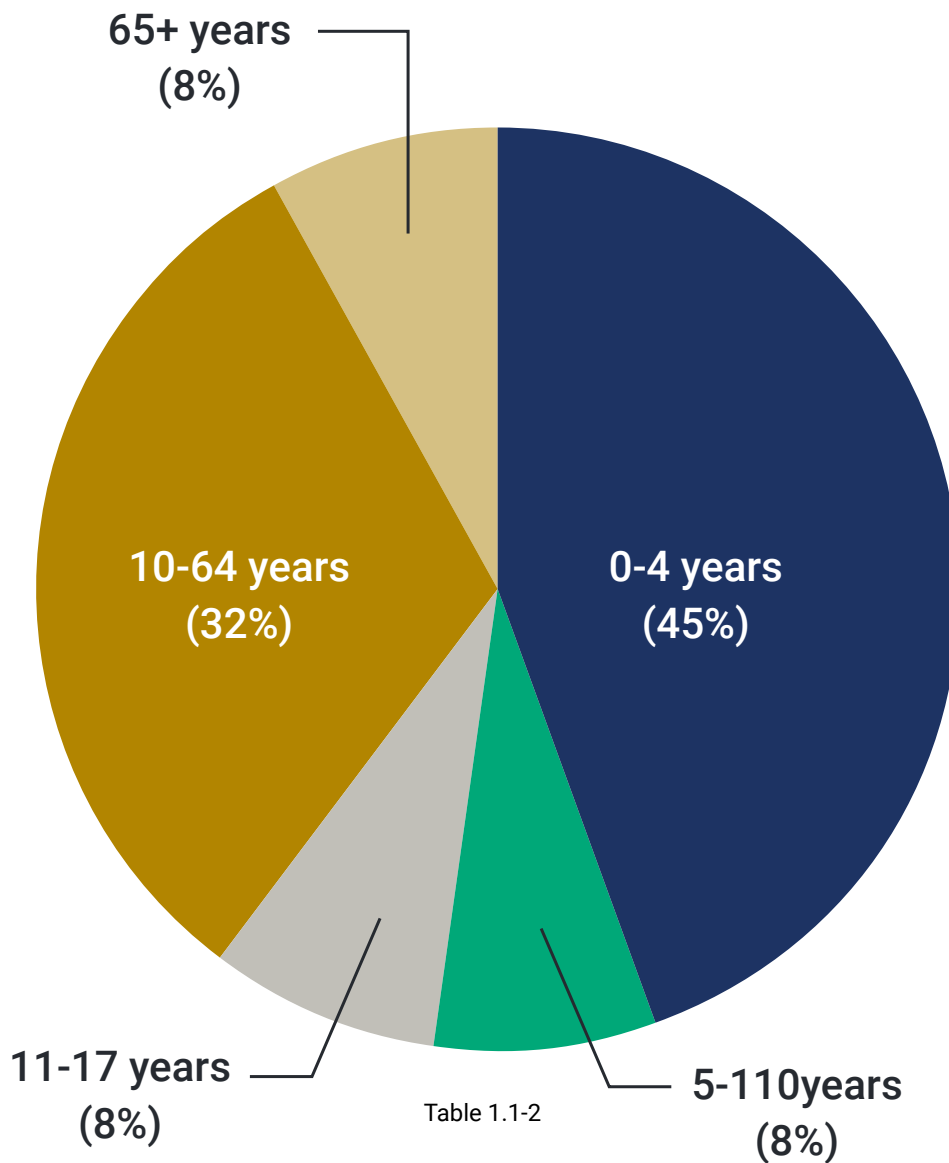


Table 1.1-2

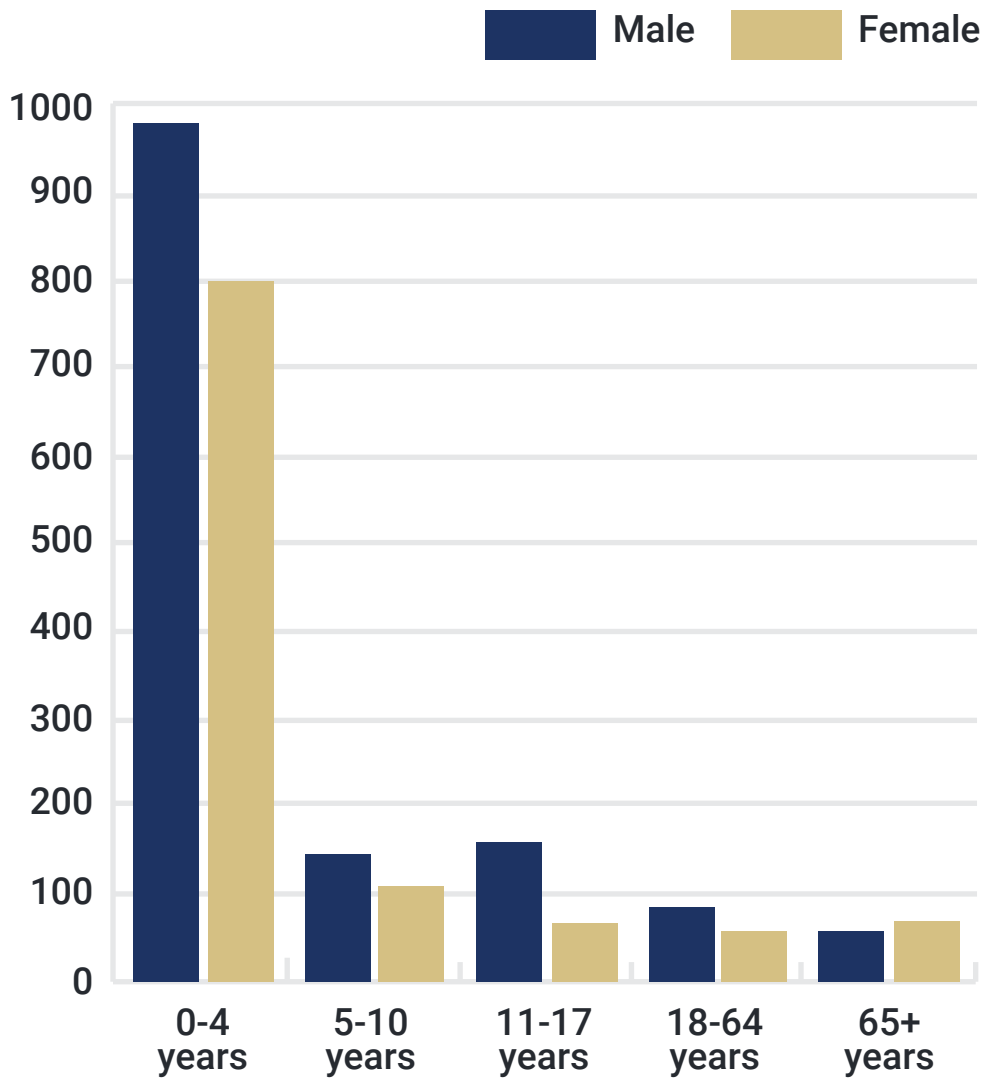


Table 1.1-2

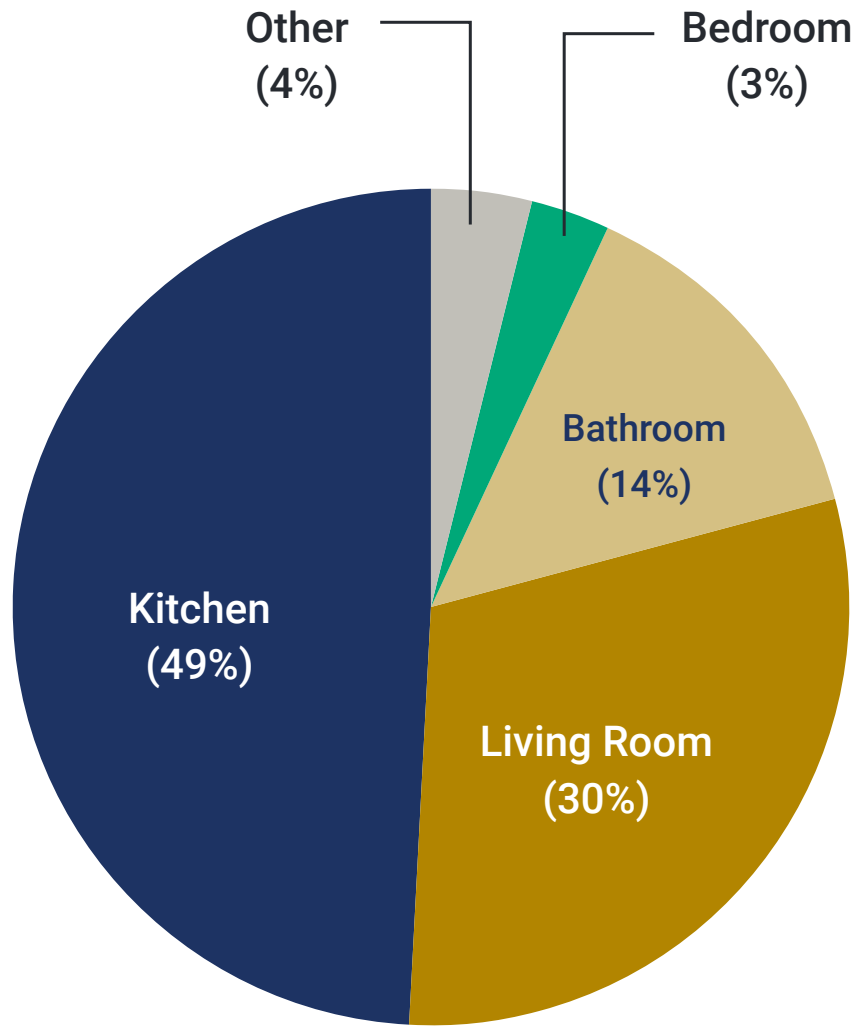
	Children 0-4 years	Severe injuries (A&E in-patient)	Fatal
1	Cups/mugs	1094	0
2	Baths	437	2.3
3	Kettles	367	0
4	Teapots/coffee pots	151	0
5	Jugs of hot water	133	0
6	Saucepans	122	0
7	Irons	121	0
8	Cookers	112	0.3
9	Fires/heaters	318	2
10	Chips pans/deep fat fryers	59	0
	<b>Total severe injuries/fatalities</b>	<b>2914</b>	<b>4.6</b>

Table 1.1-3

# Key location of accidents causing burns and scalds

Table 1.1-4

## Location of burns and scalds - children under 5



  
**50%**

Where known, nearly 50% of the severe burns/scalds injuries (ie 1550 a year or 4 a day) to children under 5 years of age happen in the kitchen. The most common items involved in these accidents are cups/mugs of hot drinks, kettles, teapots/coffee pots, saucepans, cookers and chip pans/deep fryers.



250,000

112,000 people visit Accident and Emergency units each year suffering from the effects of burns or scalds incurred in the home or leisure activities. At least a further 250,000 people visit GP surgeries for burns and scalds injuries.



7,765

7,765 people each year (21 people each day) are admitted as in-patients to A&E departments or specialist burns units suffering severe injuries from accidents involving burns and scalds. 211 people each year (4 a week) die as a result of these injuries.



58%

An estimated 58% of all severe injuries (ie 4,500 a year or over 12 a day) involve victims being admitted for 5 or more days as in-patients at hospitals or specialist burns units.



4,675

4,675 children under 18 years of age (1 every 2 hours) are admitted each year as inpatients to A&E departments or specialist burns units.



75%

Pre-school children (under 5 years of age) is the age group at greatest risk, accounting for 75% of all severe child injuries - 3,500 (almost 10 a day) - requiring admission to A&E departments or specialist burns units, many of whom require extensive plastic surgery, sometimes throughout their entire lives.



The relatively small body area (especially when hot liquids are involved), the more sensitive nature of young children's skin, and their low position in relation to hot objects (ie usually at floor level) means that young children are particularly at risk of suffering severe injuries when involved in scald or burn injuries.






Children aged under 5 are also at high risk levels of fatal accidents compared to most other age groups, apart from people aged 65 or more. These elderly people are at 4-5 times greater risk for fatal injuries than the average level for the population as a whole (3.6 fatal injuries pa per million population.)

# How typical burns vary by type of product and age of victim

Table 1.1-5

Product	Age	Typical % Burns tbsa (severe cases)	Comments
Cup	0-1½ years	15-20%	Extensive facial/upper body burns
Cup	1½-4 years	5-10%	Neck/shoulders/upper body burns
Bath	0-2½ years	20-50%	Fall in the bath/multibody burns
Bath	2½ up	10-12%	Most stand in bath, some fall in
Kettle	0-4 years	10-20%	From above - facial/upper body burns
Tea/coffee pot	0-4 years	8-15%	Upper/lower body burns
Jug hot water	0-4 years	20-40%	Body burns if young baby lies in it
Jug hot water	0-4 years	5-15%	Feet/legs when kick/knock jug
Saucepan	0-4 years	10-20%	From above facial/upper body burns
Saucepan	0-4 years	8-10%	Access elsewhere, foot/hand burns
Iron	0-4 years	1½-2½%	Localised deep dermal burns hands
Iron	0-4 years	<1%	Finger where touched iron
Cooker	0-4 years	20% and over	Clothing caught fire or sat on cooker
Cooker	0-4 years	1-5%	Fingers, hands where touched cooker
Fire heaters	0-4 years	5-20%	Fall on fire, legs, arm, part of torso
Fire heaters	0-4 years	1-2½%	Fingers/hand if touch fire
Chip/fryer	0-4 years	20-40%	From above, multibody burns
Chip/fryer	0-4 years	1-5%	Small spillage, feet arm

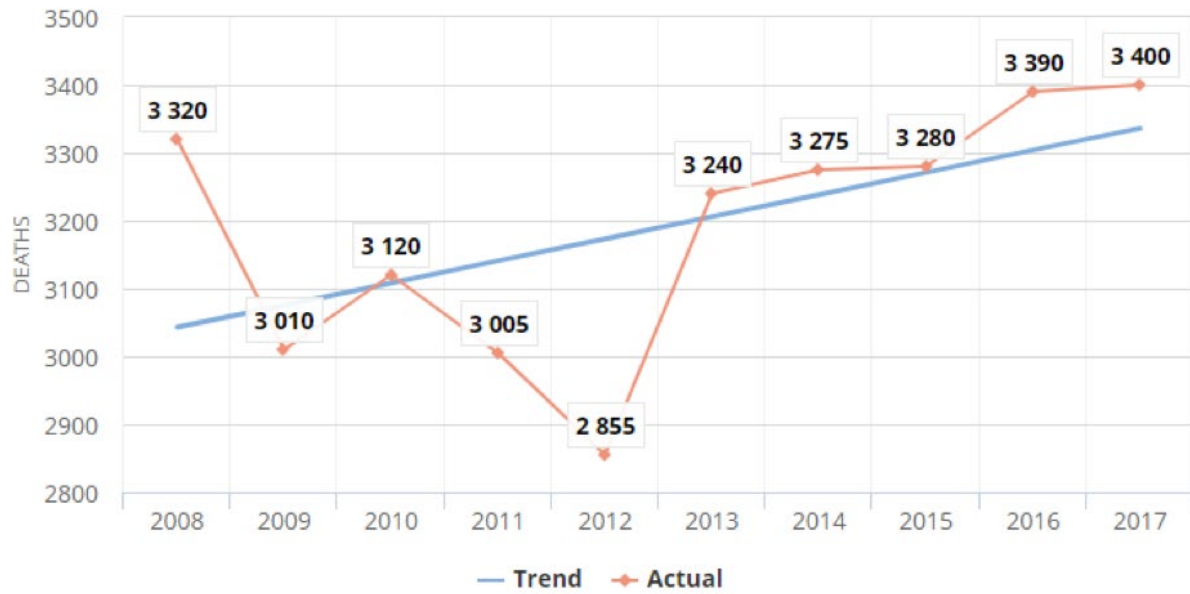
# Some facts about burn injuries

Severity of Burns	Description
<p><b>1<sup>st</sup> Degree burns</b></p> 	<p>Damage is restricted to the outermost layer of skin, the epidermis. These are generally minor injuries that might not require medical treatment. Reddening of the skin and minor pain from sunburn is an example of a first-degree burn.</p>
<p><b>2nd Degree burns</b></p> 	<p>Damage goes deeper than the epidermis and affects the next layer of skin known as the dermis. Second-degree burns are serious and require medical attention. They can cause scarring and, in some cases, require a skin graft to protect against infection while the injury heals.</p>
<p><b>3rd Degree burns</b></p> 	<p>Damage extends beyond the epidermis and dermis into the underlying tissue.</p>

## Trends in fires, deaths, injuries and dollar loss



### Fire deaths 2008-2017



### Fire injuries 2008-2017





Fire dollar loss 2008-2017



\* Adjusted to 2017 dollars



## U.S. fire statistics

Resource :

<https://www.usfa.fema.gov/data/statistics/>



## 3 Risk of Fire in a Townhomes / Residential Building / Condominium

Resource :

[https://www.usfa.fema.gov/downloads/pdf/statistics/res\\_bldg\\_fire\\_estimates.pdf](https://www.usfa.fema.gov/downloads/pdf/statistics/res_bldg_fire_estimates.pdf)



## Civilian Fire Injuries in Residential Buildings (2013-2015)

Resource:

Resource: <https://www.usfa.fema.gov/downloads/pdf/statistics/v18i5.pdf>

## A Survey of Building Hazards and Accidents By Type of Activity Falling, Tripping, Slipping Hazards & Lifting Hazards

The accident rate of injury by slipping, tripping, or falling is among the highest facing home inspectors and homeowners.

The hazard level varies widely from unlikely: (such as 1/8" difference in an uneven concrete slab on either side of a crack) to severe (such as an improperly placed ladder accessing a high roof on a windy day while reaching far out to one side to photograph a roof defect while standing on an unsecured ladder).

### Additional Fact Charts

#### TYPES OF ACCIDENTS: NUMBER OF INJURIES SUSTAINED IN THE UNITED STATES AND THEIR TOTAL LIFETIME COSTS (IN 1985 DOLLARS) <sup>1</sup>

CAUSES	FATALITIES	HOSPITALIZED	NON-HOSPITAL	LIFE TIME COST (BILLIONS \$)
Motor vehicles	45,923	23,028	4,803,000	\$48.7
Falls	12,866	783,357	11,493,000	\$37.3
Firearms	31,556	65,129	171,000	\$14.4
Poisonings	11,894	218,554	1,472,000	\$8.5
Fires/burns	5,671	54,397	1,403,000	\$3.8
Drownings	6,171	5,564	26,000	\$2.5
All others	28,487	696,707	35,001,000	\$42.4
<b>Total injuries</b>	<b>142,568<sup>1</sup></b>	<b>2,346,736</b>	<b>54,369,000</b>	
<b>Lifetime cost</b>	<b>\$49.4</b>	<b>\$80.0</b>	<b>\$28.2</b>	<b>\$157.6</b>
<b>Percent of total lifetime cost</b>	<b>31</b>	<b>51</b>	<b>18</b>	<b>100</b>

<sup>1</sup> Cost of injuries in the United States and the role of Building Safety, Jake Pauls BUILDING STANDARDS/July-August, 1991

## 2002 ACCIDENT DATA: TYPES OF DEATHS <sup>2</sup>

	ACCIDENT	PERCENT
1	Motor vehicles	44.3
2	Falls	17.8
3	Poisoning	13
4	Drownings	3.9
5	Fires, Burns, Smoke	3.4
6	Medical Surgical Complication	3.1
7	Other land transport	1.5
8	Firearms	0.8
9	Other (non-transport)	17.8

<sup>2</sup> national Vital Statistics Report, Volume 50, Number 15 (September 2002)

## Overview of the U.S. fire experience



1319500

Fires responded to  
in 2017



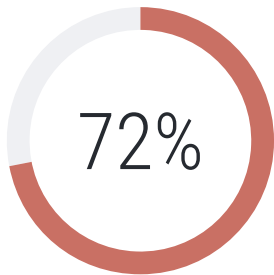
24sec

How often a U.S. fire  
department respond  
to a fire in 2017



499000

Structure fires  
in 2017

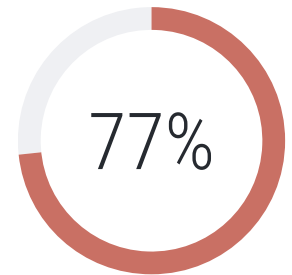


Percentage of structure  
fires that occurred in home  
structures



3400

Civilian fire deaths  
in 2017



Civilian fire deaths that  
occurred in the home



## U.S. fire problem

**Resource :**

<https://www.nfpa.org/News-and-Research/Data-research-and-tools/US-Fire-Problem>



## Fire deaths by state

**Resource :**

<https://www.nfpa.org/News-and-Research/Data-research-and-tools/US-Fire-Problem/Fire-deaths-by-state>



## Apartments

Renting a place to live in Florida creates a legally enforceable agreement between you and the owner of the property even if it is not in writing. This rental agreement imposes obligations on both the landlord and the tenant. One of the obligations imposed by state law is for a landlord to ensure that the rental property is safe and complies with state and local laws and building, housing and health codes. When there are no codes or local laws, landlords are required to keep the structural components in good working condition.

**Resource :**

<https://kfblaw.com/news/landlord-responsible-burn-injury/d-responsible-burn-injury/>



## Facts About Burn Injury

**Resource :**

<https://www.stanfordchildrens.org/en/topic/default?id=facts-about-burn-injury-90-P02796>



## Causes of electric shock

**Resource :**

<https://www.betterhealth.vic.gov.au/health/healthyliving/electric-shock>

## Additional Resources :

- ▶ <https://kidshealth.org/en/parents/safety-burns.html>
- ▶ <https://www.humanics-es.com/burns.pdf>
- ▶ <https://kfblaw.com/news/landlord-responsible-burn-injury/>
- ▶ <https://www.stanfordchildrens.org/en/topic/default?id=facts-about-burn-injury-90-P02796>
- ▶ <https://www.webmd.com/a-to-z-guides/electric-shock#1>
- ▶ <https://www.betterhealth.vic.gov.au/health/healthyliving/electric-shock>
- ▶ <https://www.health24.com/Lifestyle/Healthy-home/Living-areas/Is-your-heater-a-killer-20140603>
- ▶ <https://www.injuryclaimcoach.com/apartment-building-insurance.html>
- ▶ <https://www.nfpa.org/Public-Education/By-topic/Top-causes-of-fire/Electrical/Tamper-resistant-electrical-receptacles>
- ▶ <https://www.naahq.org/july-2015/avoiding-chemical-spills>
- ▶ <https://www.electricalsafetyfirst.org.uk/guidance/safety-around-the-home/>
- ▶ [https://real-estate-law.freeadvice.com/real-estate-law/landlord\\_tenant/landlord-liability.htm](https://real-estate-law.freeadvice.com/real-estate-law/landlord_tenant/landlord-liability.htm)
- ▶ <https://gringosabroad.com/electric-showers-are-they-safe-how-shocking/>
- ▶ [https://arma.org.uk/downloader/bf8/ESC\\_Guidance\\_Communal\\_Areas.pdf](https://arma.org.uk/downloader/bf8/ESC_Guidance_Communal_Areas.pdf)
- ▶ <https://www.resolvebylowes.com/guidance/fire/top-five-most-common-areas-in-your-home-where-fires-start/115000977412>
- ▶ <https://www.rosopa.com/home-safety/advice/general/preventing-accidents-in-the-home/>
- ▶ <https://www.thehartford.com/about-us/junior-fire-marshal/apartment-fire-safety>
- ▶ <https://www.usfa.fema.gov/data/statistics/>
- ▶ <https://www.usfa.fema.gov/downloads/pdf/statistics/v18i5.pdf>
- ▶ <http://www.flat-living.co.uk/advice/700-12-of-apartment-blocks-under-serious-fire-hazard-threat>
- ▶ <http://www.klawnc.com/common-apartment-safety-hazards/>
- ▶ <https://www.firerescue1.com/fire-attack/articles/761339-How-to-attack-townhouse-fires/>
- ▶ <https://www.nfpa.org/News-and-Research/Data-research-and-tools/US-Fire-Problem>
- ▶ <https://www.nfpa.org/News-and-Research/Data-research-and-tools/US-Fire-Problem/Fire-deaths-by-state>