



**RESEARCH**

# Home Cooking Fires **Supporting Tables**

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## Home Cooking Fires: Supporting Tables

The tables in this document are a companion to the [report of the same name](#). Firefighter deaths and injuries are excluded from this analysis.

Most tables — with the exception of fires by year — show estimates of 2014–2018 annual averages. Fires that occurred outside the home and not on the structure are excluded. Estimates were derived from the US Fire Administration’s [National Fire Incident Reporting System \(NFIRS\)](#) and NFPA’s annual fire experience survey, and they include proportional shares of unknown or missing data. Fires are rounded to the nearest 100, deaths and injuries are rounded to the nearest ten, and property loss is rounded to the nearest million dollars. Inflation adjustments were made only for the trend table. Percentages were calculated on unrounded estimates.

Fires with NFIRS incident type Code 113 indicating a confined cooking fire were analyzed separately from fires with non-confined structure fire incident types and then summed. Estimates include proportional shares of fires in which the equipment involved was unknown or not reported. Other causal factors were allocated separately. For more information on how these estimates were calculated, please see the [full report](#) and [How NFPA's National Estimates Are Calculated for Home Structure Fires](#).

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**Table 1. Home Cooking Structure Fires by Year**

Year	Fires	Civilian Deaths	Civilian Injuries	Direct Property Damage (in Millions) as Reported in 2018 Dollars	
1980	148,300	500	5,030	\$245	\$748
1981	153,500	530	5,090	\$766	\$2,113
1982	136,500	500	5,540	\$422	\$1,097
1983	125,200	470	5,610	\$343	\$864
1984	124,100	480	4,910	\$372	\$898
1985	127,500	450	4,870	\$350	\$816
1986	127,700	510	5,010	\$398	\$913
1987	125,100	410	5,500	\$397	\$878
1988	126,700	470	5,870	\$461	\$980
1989	119,800	480	5,480	\$451	\$914
1990	120,500	440	6,050	\$476	\$916
1991	122,100	360	6,060	\$621	\$1,145
1992	130,300	350	6,010	\$451	\$808
1993	128,400	430	6,530	\$548	\$953
1994	118,200	370	5,500	\$618	\$1,048
1995	111,700	370	5,390	\$446	\$735
1996	115,200	470	5,490	\$519	\$832
1997	117,500	380	5,760	\$565	\$884
1998	109,100	500	5,380	\$527	\$813
1999	85,800 (37,200)	300 (300)	2,620 (1,670)	\$497 (\$468)	\$749
2000	95,500 (34,500)	230 (230)	3,820 (2,540)	\$516 (\$474)	\$753
2001	120,600 (38,300)	500 (500)	4,470 (2,940)	\$521 (\$498)	\$740
2002	128,200 (37,700)	150 (150)	4,330 (2,930)	\$671 (\$642)	\$937
2003	143,400 (35,500)	530 (520)	4,520 (3,070)	\$768 (\$736)	\$1,050
2004	151,000 (35,900)	620 (610)	4,820 (3,290)	\$723 (\$697)	\$963
2005	147,000 (37,500)	500 (480)	4,740 (3,300)	\$874 (\$842)	\$1,124
2006	159,700 (40,100)	360 (360)	4,580 (3,120)	\$684 (\$663)	\$852
2007	158,200 (40,700)	420 (420)	4,940 (3,320)	\$541 (\$522)	\$655
2008	157,900 (39,600)	400 (400)	5,180 (3,490)	\$921 (\$897)	\$1,076
2009	154,200 (35,700)	300 (300)	4,600 (3,020)	\$965 (\$929)	\$1,130
2010	156,300 (37,400)	420 (420)	5,300 (3,560)	\$993 (\$967)	\$1,145
2011	156,300 (38,300)	470 (470)	5,390 (3,840)	\$1,002 (\$977)	\$1,120

**Table 1. Home Cooking Structure Fires by Year (Continued)**

<b>Year</b>	<b>Fires</b>		<b>Civilian Deaths</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions) as Reported in 2018 Dollars</b>		
2012	167,800	(44,700)	370	(370)	5,820	(4,200)	\$1,299	(\$1,274)	\$1,423
2013	172,000	(43,600)	570	(570)	5,430	(3,960)	\$1,115	(\$1,085)	\$1,202
2014	173,300	(42,900)	580	(580)	5,330	(4,030)	\$1,158	(\$1,131)	\$1,228
2015	179,000	(45,000)	560	(560)	5,200	(3,940)	\$1,151	(\$1,121)	\$1,220
2016	172,100	(43,500)	530	(530)	5,270	(3,890)	\$1,133	(\$1,106)	\$1,187
2017	172,800	(39,300)	500	(500)	4,500	(3,300)	\$1,184	(\$1,154)	\$1,214
2018	170,100	(38,100)	540	(540)	4,400	(3,300)	\$1,264	(\$1,231)	\$1,264

Note: Numbers in parentheses exclude confined fires. Confined fires are fires reported as confined to a cooking vessel and involving cooking equipment, and they are analyzed separately. National estimates are projections. Casualty and loss projections can be heavily influenced by the inclusion or exclusion of one unusually serious fire. Because of low participation in NFIRS Version 5.0 during 1999–2001, estimates for those years are highly uncertain and must be used with caution. The inflation adjustment to 2018 dollars was done using the US Consumer Price Index: Purchasing Power of the Consumer Dollar. Unknowns have been allocated proportionally.

Source: NFIRS and NFPA fire experience survey.

**Table 2. Home Cooking Structure Fires by Month  
2014–2018 Annual Averages**

Month	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
January	15,400	(9%)	90	(15%)	460	(10%)	\$106	(9%)
February	13,600	(8%)	50	(10%)	410	(9%)	\$101	(8%)
March	14,800	(9%)	60	(11%)	470	(10%)	\$113	(9%)
April	14,700	(9%)	60	(10%)	400	(8%)	\$105	(9%)
May	14,800	(9%)	30	(5%)	420	(9%)	\$112	(9%)
June	13,700	(8%)	10	(3%)	350	(7%)	\$104	(9%)
July	13,300	(8%)	40	(7%)	390	(8%)	\$87	(7%)
August	13,400	(8%)	20	(4%)	380	(8%)	\$111	(9%)
September	13,600	(8%)	50	(9%)	390	(8%)	\$90	(7%)
October	14,700	(9%)	50	(9%)	400	(8%)	\$85	(7%)
November	15,800	(9%)	30	(6%)	400	(8%)	\$86	(7%)
December	15,100	(9%)	60	(11%)	350	(7%)	\$96	(8%)
Total	172,900	(100%)	550	(100%)	4,820	(100%)	\$1,196	(100%)
Monthly average	14,400	(8%)	50	(8%)	400	(8%)	\$100	(8%)

**Table 3. Home Cooking Structure Fires by Day of the Week  
2014–2018 Annual Averages**

Day of the Week	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Sunday	27,600	(16%)	70	(13%)	730	(15%)	\$189	(16%)
Monday	24,200	(14%)	40	(8%)	620	(13%)	\$162	(14%)
Tuesday	23,900	(14%)	80	(14%)	690	(14%)	\$166	(14%)
Wednesday	23,700	(14%)	90	(16%)	720	(15%)	\$174	(15%)
Thursday	24,700	(14%)	70	(12%)	690	(14%)	\$177	(15%)
Friday	23,000	(13%)	100	(18%)	660	(14%)	\$151	(13%)
Saturday	25,800	(15%)	100	(19%)	710	(15%)	\$178	(15%)
Total	172,900	(100%)	550	(100%)	4,820	(100%)	\$1,196	(100%)
Average by day of week	24,700	(14%)	80	(14%)	690	(14%)	\$171	(14%)

Note: Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.

**Table 4. Home Cooking Structure Fires by Time of Day  
2014–2018 Annual Averages**

<b>Time of Day</b>	<b>Fires</b>		<b>Civilian Deaths</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Midnight–12:59 a.m.	3,600	(2%)	30	(5%)	130	(3%)	\$35	(3%)
1:00–1:59 a.m.	2,900	(2%)	30	(5%)	150	(3%)	\$33	(3%)
2:00–2:59 a.m.	2,400	(1%)	40	(7%)	100	(2%)	\$21	(2%)
3:00–3:59 a.m.	2,000	(1%)	30	(6%)	100	(2%)	\$38	(3%)
4:00–4:59 a.m.	1,700	(1%)	30	(6%)	90	(2%)	\$23	(2%)
5:00–5:59 a.m.	1,600	(1%)	20	(4%)	70	(1%)	\$17	(1%)
6:00–6:59 a.m.	1,900	(1%)	30	(6%)	50	(1%)	\$22	(2%)
7:00–7:59 a.m.	3,000	(2%)	30	(5%)	90	(2%)	\$20	(2%)
8:00–8:59 a.m.	4,400	(3%)	20	(3%)	130	(3%)	\$34	(3%)
9:00–9:59 a.m.	5,900	(3%)	20	(4%)	120	(3%)	\$43	(4%)
10:00–10:59 a.m.	7,300	(4%)	10	(3%)	180	(4%)	\$48	(4%)
11:00–11:59 a.m.	8,500	(5%)	10	(2%)	210	(4%)	\$50	(4%)
12:00–12:59 p.m.	9,600	(6%)	10	(2%)	260	(5%)	\$65	(5%)
1:00–1:59 p.m.	9,800	(6%)	10	(3%)	250	(5%)	\$69	(6%)
2:00–2:59 p.m.	9,800	(6%)	30	(5%)	250	(5%)	\$66	(5%)
3:00–3:59 p.m.	10,600	(6%)	20	(4%)	300	(6%)	\$74	(6%)
4:00–4:59 p.m.	12,100	(7%)	20	(3%)	280	(6%)	\$79	(7%)
5:00–5:59 p.m.	14,900	(9%)	10	(1%)	360	(8%)	\$93	(8%)
6:00–6:59 p.m.	16,000	(9%)	20	(4%)	420	(9%)	\$96	(8%)
7:00–7:59 p.m.	14,400	(8%)	20	(4%)	370	(8%)	\$79	(7%)
8:00–8:59 p.m.	11,600	(7%)	30	(5%)	310	(6%)	\$65	(5%)
9:00–9:59 p.m.	8,400	(5%)	30	(5%)	240	(5%)	\$54	(5%)
10:00–10:59 p.m.	6,100	(4%)	20	(4%)	180	(4%)	\$38	(3%)
11:00–11:59 p.m.	4,500	(3%)	30	(5%)	150	(3%)	\$35	(3%)
<b>Total</b>	<b>172,900</b>	<b>(100%)</b>	<b>550</b>	<b>(100%)</b>	<b>4,820</b>	<b>(100%)</b>	<b>\$1,196</b>	<b>(100%)</b>
<b>Average by hour</b>	<b>7,200</b>	<b>(4%)</b>	<b>20</b>	<b>(4%)</b>	<b>200</b>	<b>(4%)</b>	<b>\$50</b>	<b>(4%)</b>

Note: Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.

**Table 5. Home Cooking Structure Fires by Area of Origin  
2014–2018 Annual Averages**

<b>Area of Origin</b>	<b>Fires</b>		<b>Civilian Deaths</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Kitchen or cooking area	161,500	(93%)	500	(92%)	4,640	(96%)	\$1,022	(85%)
Non-confined fire	38,600	(22%)	500	(92%)	3,450	(72%)	\$993	(83%)
Confined fire	122,900	(71%)	0	(0%)	1,190	(25%)	\$29	(2%)
Unclassified area of origin	2,400	(1%)	0	(0%)	10	(0%)	\$1	(0%)
Non-confined fire	100	(0%)	0	(0%)	0	(0%)	\$1	(0%)
Confined fire	2,300	(1%)	0	(0%)	10	(0%)	\$0	(0%)
Courtyard, patio, or terrace	1,800	(1%)	0	(0%)	30	(1%)	\$24	(2%)
Non-confined fire	500	(0%)	0	(0%)	20	(0%)	\$24	(2%)
Confined fire	1,300	(1%)	0	(0%)	10	(0%)	\$0	(0%)
Unclassified outside area	1,700	(1%)	0	(0%)	10	(0%)	\$8	(1%)
Non-confined fire	200	(0%)	0	(0%)	10	(0%)	\$8	(1%)
Confined fire	1,500	(1%)	0	(0%)	0	(0%)	\$0	(0%)
Exterior balcony or unenclosed porch	1,600	(1%)	0	(1%)	40	(1%)	\$60	(5%)
Non-confined fire	800	(0%)	0	(1%)	30	(1%)	\$60	(5%)
Confined fire	800	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Other known area of origin	4,000	(2%)	40	(7%)	100	(2%)	\$81	(7%)
Non-confined fire	1,400	(1%)	40	(7%)	80	(2%)	\$80	(7%)
Confined fire	2,600	(1%)	0	(0%)	20	(0%)	\$1	(0%)
<b>Total</b>	<b>172,900</b>	<b>(100%)</b>	<b>550</b>	<b>(100%)</b>	<b>4,820</b>	<b>(100%)</b>	<b>\$1,196</b>	<b>(100%)</b>
Non-confined fire	41,500	(24%)	550	(100%)	3,590	(75%)	\$1,166	(97%)
Confined fire	131,400	(76%)	0	(0%)	1,230	(25%)	\$30	(3%)

Note: Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.

**Table 6 Home Cooking Structure Fires by Factor Contributing to Ignition  
2014–2018 Annual Averages**

<b>Factor Contributing to Ignition</b>	<b>Fires</b>	<b>Civilian Deaths</b>	<b>Civilian Injuries</b>	<b>Direct Property Damage (in Millions)</b>
Equipment unattended	53,100 (31%)	290 (53%)	2,130 (44%)	\$465 (39%)
Non-confined	15,600 (9%)	290 (53%)	1,670 (35%)	\$456 (38%)
Confined	37,500 (22%)	0 (0%)	460 (10%)	\$9 (1%)
Abandoned or discarded material or product	17,200 (10%)	60 (11%)	470 (10%)	\$111 (9%)
Non-confined	3,600 (2%)	60 (11%)	360 (8%)	\$107 (9%)
Confined	13,700 (8%)	0 (0%)	110 (2%)	\$3 (0%)
Heat source too close to combustibles	15,900 (9%)	80 (15%)	520 (11%)	\$164 (14%)
Non-confined	5,200 (3%)	80 (15%)	410 (8%)	\$161 (13%)
Confined	10,700 (6%)	0 (0%)	110 (2%)	\$3 (0%)
Unclassified misuse of material or product	15,200 (9%)	20 (3%)	390 (8%)	\$72 (6%)
Non-confined	2,500 (1%)	20 (3%)	250 (5%)	\$69 (6%)
Confined	12,700 (7%)	0 (0%)	140 (3%)	\$2 (0%)
Failure to clean	14,000 (8%)	0 (0%)	90 (2%)	\$9 (1%)
Non-confined	1,300 (1%)	0 (0%)	60 (1%)	\$8 (1%)
Confined	12,700 (7%)	0 (0%)	40 (1%)	\$1 (0%)
Unintentionally turned on or not turned off	13,100 (8%)	50 (8%)	380 (8%)	\$155 (13%)
Non-confined	4,400 (3%)	50 (8%)	300 (6%)	\$152 (13%)
Confined	8,700 (5%)	0 (0%)	80 (2%)	\$2 (0%)
Unclassified factor contributed to ignition	9,500 (5%)	20 (4%)	280 (6%)	\$42 (4%)
Non-confined	1,500 (1%)	20 (4%)	140 (3%)	\$39 (3%)
Confined	8,000 (5%)	0 (0%)	130 (3%)	\$2 (0%)
Mechanical failure or malfunction	9,300 (5%)	10 (2%)	90 (2%)	\$55 (5%)
Non-confined	1,900 (1%)	10 (2%)	60 (1%)	\$54 (4%)
Confined	7,400 (4%)	0 (0%)	30 (1%)	\$1 (0%)
Electrical failure or malfunction	8,400 (5%)	10 (2%)	160 (3%)	\$69 (6%)
Non-confined	2,900 (2%)	10 (2%)	150 (3%)	\$68 (6%)
Confined	5,600 (3%)	0 (0%)	10 (0%)	\$1 (0%)
Equipment not being operated properly	4,300 (2%)	10 (1%)	110 (2%)	\$21 (2%)
Non-confined	800 (0%)	10 (1%)	80 (2%)	\$20 (2%)
Confined	3,500 (2%)	0 (0%)	30 (1%)	\$1 (0%)



**Table 6. Home Cooking Structure Fires, by Factor Contributing to Ignition  
2014–2018 Annual Averages (Continued)**

<b>Factor Contributing to Ignition</b>	<b>Fires</b>	<b>Civilian Deaths</b>	<b>Civilian Injuries</b>	<b>Direct Property Damage (in Millions)</b>
Unclassified operational deficiency	3,800 (2%)	10 (2%)	80 (2%)	\$10 (1%)
Non-confined	600 (0%)	10 (2%)	50 (1%)	\$10 (1%)
Confined	3,200 (2%)	0 (0%)	30 (1%)	\$1 (0%)
Improper container or storage	3,600 (2%)	0 (0%)	50 (1%)	\$11 (1%)
Non-confined	600 (0%)	0 (0%)	30 (1%)	\$10 (1%)
Confined	3,000 (2%)	0 (0%)	20 (0%)	\$1 (0%)
Flammable liquid or gas spilled	3,000 (2%)	0 (0%)	140 (3%)	\$19 (2%)
Non-confined	700 (0%)	0 (0%)	100 (2%)	\$18 (1%)
Confined	2,200 (1%)	0 (0%)	40 (1%)	\$1 (0%)
Other known factor	6,900 (4%)	20 (3%)	180 (4%)	\$77 (6%)
Non-confined	2,000 (1%)	20 (3%)	140 (3%)	\$76 (6%)
Confined	4,900 (3%)	0 (0%)	40 (1%)	\$1 (0%)
<b>Total Fires</b>	<b>172,900 (100%)</b>	<b>550 (100%)</b>	<b>4,820 (100%)</b>	<b>\$1,196 (100%)</b>
Non-confined	41,500 (24%)	550 (100%)	3,590 (75%)	\$1,166 (97%)
Confined	131,400 (76%)	0 (0%)	1,230 (25%)	\$30 (3%)
<b>Total Factors</b>	<b>177,200 (102%)</b>	<b>580 (105%)</b>	<b>5,060 (105%)</b>	<b>\$1,279 (107%)</b>
Non-confined	43,600 (25%)	580 (105%)	3,810 (79%)	\$1,248 (104%)
Confined	133,600 (77%)	0 (0%)	1,260 (26%)	\$31 (3%)

Note: Multiple entries are allowed, resulting in more factor entries than fires. Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.

**Table 7A. Home Cooking Structure Fires by Human Factor Contributing to Ignition  
2014–2018 Annual Averages**

Human Factor Contributing to Ignition	Fires		Civilian Deaths		Civilian Injuries		Direct Property Damage (in Millions)	
Unattended or unsupervised person	21,800	(13%)	70	(13%)	690	(14%)	\$206	(17%)
Non-confined fire	6,300	(4%)	70	(13%)	510	(11%)	\$200	(17%)
Confined fire	15,500	(9%)	0	(0%)	180	(4%)	\$7	(1%)
Asleep	7,700	(4%)	140	(26%)	550	(11%)	\$110	(9%)
Non-confined fire	2,400	(1%)	140	(26%)	410	(9%)	\$108	(9%)
Confined fire	5,200	(3%)	0	(0%)	140	(3%)	\$2	(0%)
Possibly impaired by alcohol or drugs	2,600	(1%)	70	(13%)	270	(6%)	\$29	(2%)
Non-confined fire	800	(0%)	70	(13%)	210	(4%)	\$29	(2%)
Confined fire	1,800	(1%)	0	(0%)	60	(1%)	\$0	(0%)
Age was a factor	2,300	(1%)	40	(7%)	140	(3%)	\$21	(2%)
Non-confined fire	700	(0%)	40	(7%)	110	(2%)	\$21	(2%)
Confined fire	1,600	(1%)	0	(0%)	30	(1%)	\$1	(0%)
Possibly mentally disabled	1,000	(1%)	10	(3%)	60	(1%)	\$10	(1%)
Non-confined fire	300	(0%)	10	(3%)	50	(1%)	\$10	(1%)
Confined fire	700	(0%)	0	(0%)	10	(0%)	\$0	(0%)
Multiple persons involved	600	(0%)	20	(4%)	50	(1%)	\$7	(1%)
Non-confined fire	200	(0%)	20	(4%)	30	(1%)	\$7	(1%)
Confined fire	400	(0%)	0	(0%)	10	(0%)	\$0	(0%)
Physically disabled	600	(0%)	10	(2%)	50	(1%)	\$12	(1%)
Non-confined fire	200	(0%)	10	(2%)	40	(1%)	\$11	(1%)
Confined fire	400	(0%)	0	(0%)	20	(0%)	\$0	(0%)
None	138,000	(80%)	240	(44%)	3,210	(67%)	\$827	(69%)
Non-confined fire	31,000	(18%)	240	(44%)	2,390	(50%)	\$806	(67%)
Confined fire	106,900	(62%)	0	(0%)	820	(17%)	\$21	(2%)
<b>Total fires</b>	<b>172,900</b>	<b>(100%)</b>	<b>550</b>	<b>(100%)</b>	<b>4,820</b>	<b>(100%)</b>	<b>\$1,196</b>	<b>(100%)</b>
Non-confined fire	41,500	(24%)	550	(100%)	3,590	(75%)	\$1,166	(97%)
Confined fire	131,400	(76%)	0	(0%)	1,230	(25%)	\$30	(3%)
<b>Total factors</b>	<b>174,600</b>	<b>(101%)</b>	<b>620</b>	<b>(112%)</b>	<b>5,020</b>	<b>(104%)</b>	<b>\$1,221</b>	<b>(102%)</b>
Non-confined fire	42,100	(24%)	620	(112%)	3,750	(78%)	\$1,191	(100%)
Confined fire	132,500	(77%)	0	(0%)	1,270	(26%)	\$30	(3%)

Note: Multiple entries are allowed, resulting in more factor entries than fires. Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.

**Table 7B. Home Cooking Structure Fires Reported Between 11 p.m. and 7 a.m.  
by Human Factor Contributing to Ignition, 2014–2018 Annual Averages**

<b>Human Factor Contributing to Ignition</b>	<b>Fires</b>		<b>Civilian Deaths</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Asleep	4,000	(20%)	100	(41%)	280	(33%)	\$66	(29%)
Non-confined fire	1,200	(6%)	100	(41%)	220	(26%)	\$65	(29%)
Confined fire	2,800	(14%)	0	(0%)	60	(7%)	\$1	(0%)
Unattended or unsupervised person	2,500	(12%)	30	(12%)	120	(14%)	\$30	(14%)
Non-confined fire	700	(4%)	30	(12%)	100	(11%)	\$29	(13%)
Confined fire	1,700	(8%)	0	(0%)	30	(3%)	\$1	(0%)
Possibly impaired by alcohol or drugs	1,100	(6%)	40	(18%)	110	(13%)	\$15	(7%)
Non-confined fire	300	(2%)	40	(18%)	90	(11%)	\$15	(7%)
Confined fire	800	(4%)	0	(0%)	20	(3%)	\$0	(0%)
Age was a factor	200	(1%)	10	(5%)	10	(1%)	\$1	(1%)
Non-confined fire	100	(0%)	10	(5%)	10	(1%)	\$1	(1%)
Confined fire	100	(1%)	0	(0%)	0	(0%)	\$0	(0%)
Possibly mentally disabled	200	(1%)	0	(0%)	20	(2%)	\$1	(1%)
Non-confined fire	100	(0%)	0	(0%)	10	(1%)	\$1	(0%)
Confined fire	100	(1%)	0	(0%)	0	(0%)	\$0	(0%)
Physically disabled	100	(0%)	0	(1%)	0	(0%)	\$1	(1%)
Non-confined fire	0	(0%)	0	(1%)	0	(0%)	\$1	(1%)
Confined fire	100	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Multiple persons involved	100	(0%)	0	(0%)	0	(0%)	\$5	(2%)
Non-confined fire	0	(0%)	0	(0%)	0	(0%)	\$5	(2%)
Confined fire	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
None	13,000	(63%)	90	(36%)	380	(44%)	\$112	(50%)
Non-confined fire	3,600	(17%)	90	(36%)	300	(35%)	\$110	(49%)
Confined fire	9,400	(46%)	0	(0%)	70	(9%)	\$2	(1%)
<b>Total fires</b>	<b>20,500</b>	<b>(100%)</b>	<b>240</b>	<b>(100%)</b>	<b>860</b>	<b>(100%)</b>	<b>\$223</b>	<b>(100%)</b>
Non-confined fire	5,800	(28%)	240	(100%)	680	(79%)	\$220	(99%)
Confined fire	14,700	(72%)	0	(0%)	180	(21%)	\$3	(1%)
<b>Total factors</b>	<b>21,100</b>	<b>(103%)</b>	<b>270</b>	<b>(114%)</b>	<b>930</b>	<b>(108%)</b>	<b>\$231</b>	<b>(104%)</b>
Non-confined fire	6,000	(29%)	270	(114%)	730	(86%)	\$228	(102%)
Confined fire	15,100	(74%)	0	(0%)	190	(23%)	\$3	(1%)

Note: Multiple entries are allowed, resulting in more factor entries than fires. Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.

**Table 7C. Home Cooking Structure Fires Reported Between 7 a.m. and 11 p.m.  
by Human Factor Contributing to Ignition, 2014–2018 Annual Averages**

<b>Human Factor Contributing to Ignition</b>	<b>Fires</b>		<b>Civilian Deaths</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Unattended or unsupervised person	19,300	(13%)	40	(13%)	570	(14%)	\$176	(18%)
Non-confined fire	5,600	(4%)	40	(13%)	410	(10%)	\$170	(17%)
Confined fire	13,700	(9%)	0	(0%)	150	(4%)	\$6	(1%)
Asleep	3,900	(3%)	50	(15%)	260	(7%)	\$44	(4%)
Non-confined fire	1,300	(1%)	50	(15%)	190	(5%)	\$43	(4%)
Confined fire	2,600	(2%)	0	(0%)	70	(2%)	\$1	(0%)
Age was a factor	2,100	(1%)	30	(9%)	130	(3%)	\$20	(2%)
Non-confined fire	700	(0%)	30	(9%)	100	(3%)	\$19	(2%)
Confined fire	1,400	(1%)	0	(0%)	30	(1%)	\$1	(0%)
Possibly impaired by alcohol or drugs	1,500	(1%)	30	(10%)	160	(4%)	\$14	(1%)
Non-confined fire	500	(0%)	30	(10%)	120	(3%)	\$13	(1%)
Confined fire	1,100	(1%)	0	(0%)	40	(1%)	\$0	(0%)
Possibly mentally disabled	900	(1%)	10	(5%)	50	(1%)	\$9	(1%)
Non-confined fire	300	(0%)	10	(5%)	40	(1%)	\$9	(1%)
Confined fire	600	(0%)	0	(0%)	10	(0%)	\$0	(0%)
Multiple persons involved	500	(0%)	10	(3%)	50	(1%)	\$7	(1%)
Non-confined fire	200	(0%)	10	(3%)	30	(1%)	\$7	(1%)
Confined fire	300	(0%)	0	(0%)	20	(0%)	\$0	(0%)
Physically disabled	500	(0%)	20	(7%)	40	(1%)	\$6	(1%)
Non-confined fire	200	(0%)	20	(7%)	30	(1%)	\$6	(1%)
Confined fire	300	(0%)	0	(0%)	10	(0%)	\$0	(0%)
None	124,800	(82%)	160	(50%)	2,830	(71%)	\$715	(73%)
Non-confined fire	27,500	(18%)	160	(50%)	2,090	(53%)	\$696	(72%)
Confined fire	97,300	(64%)	0	(0%)	740	(19%)	\$19	(2%)
<b>Total fires</b>	<b>152,400</b>	<b>(100%)</b>	<b>310</b>	<b>(100%)</b>	<b>3,960</b>	<b>(100%)</b>	<b>\$973</b>	<b>(100%)</b>
Non-confined fire	35,700	(23%)	310	(100%)	2,910	(73%)	\$946	(97%)
Confined fire	116,700	(77%)	0	(0%)	1,050	(27%)	\$27	(3%)
<b>Total factors</b>	<b>153,500</b>	<b>101%</b>	<b>350</b>	<b>111%</b>	<b>4,090</b>	<b>103%</b>	<b>\$990</b>	<b>102%</b>
Non-confined fire	36,100	24%	350	111%	3,020	76%	\$963	99%
Confined fire	117,400	77%	0	0%	1,070	27%	\$27	3%

Note: Multiple entries are allowed, resulting in more factor entries than fires. Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.

**Table 8. Home Cooking Structure Fires by Item First Ignited  
2014–2018 Annual Average**

<b>Item First Ignited</b>	<b>Fires</b>		<b>Civilian Deaths</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Cooking materials, including food	114,400	(66%)	280	(51%)	3,220	(67%)	\$581	(49%)
Non-confined fire	22,700	(13%)	280	(51%)	2,370	(49%)	\$563	(47%)
Confined fire	91,700	(53%)	0	(0%)	850	(18%)	\$19	(2%)
Appliance housing or casing	11,000	(6%)	30	(6%)	220	(5%)	\$66	(6%)
Non-confined fire	3,000	(2%)	30	(6%)	170	(4%)	\$63	(5%)
Confined fire	8,000	(5%)	0	(0%)	50	(1%)	\$3	(0%)
Household utensils	9,200	(5%)	20	(4%)	200	(4%)	\$38	(3%)
Non-confined fire	1,700	(1%)	20	(4%)	120	(2%)	\$36	(3%)
Confined fire	7,500	(4%)	0	(0%)	80	(2%)	\$2	(0%)
Unclassified item first ignited	7,900	(5%)	10	(2%)	150	(3%)	\$37	(3%)
Non-confined fire	1,300	(1%)	10	(2%)	70	(1%)	\$35	(3%)
Confined fire	6,700	(4%)	0	(0%)	80	(2%)	\$2	(0%)
Flammable or combustible liquid or gas, piping, or filter	6,200	(4%)	30	(6%)	330	(7%)	\$72	(6%)
Non-confined fire	2,200	(1%)	30	(6%)	250	(5%)	\$70	(6%)
Confined fire	4,000	(2%)	0	(0%)	80	(2%)	\$1	(0%)
Cabinetry	3,400	(2%)	30	(6%)	150	(3%)	\$99	(8%)
Non-confined fire	2,400	(1%)	30	(6%)	140	(3%)	\$98	(8%)
Confined fire	1,000	(1%)	0	(0%)	20	(0%)	\$1	(0%)
Other known item first ignited	20,800	(12%)	150	(27%)	550	(11%)	\$304	(25%)
Non-confined fire	8,200	(5%)	150	(27%)	470	(10%)	\$301	(25%)
Confined fire	12,600	(7%)	0	(0%)	80	(2%)	\$3	(0%)
<b>Total</b>	<b>172,900</b>	<b>(100%)</b>	<b>550</b>	<b>(100%)</b>	<b>4,820</b>	<b>(100%)</b>	<b>\$1,196</b>	<b>(100%)</b>
Non-confined fire	41,500	(24%)	550	(100%)	3,590	(75%)	\$1,166	(97%)
Confined fire	131,400	(76%)	0	(0%)	1,230	(25%)	\$30	(3%)
The following other known items were first ignited in less than 2% of the fires but in at least 10, or 2%, of the deaths:								
Clothing			40	(8%)				
Multiple items first ignited			20	(3%)				
Interior wall covering			10	(2%)				
Unclassified structural component or finish			10	(2%)				
Upholstered furniture			10	(2%)				
Unclassified organic material			10	(2%)				

Note: Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA Fire Experience Survey.

**Table 9. Home Cooking Structure Fires That Began with Cooking Materials, Including Food by Type of Material First Ignited, 2014–2018 Annual Averages**

Type of Material First Ignited	Fires	Civilian Deaths	Civilian Injuries	Direct Property Damage (in Millions)
Food or starch, excluding fat and grease	43,100 (38%)	90 (31%)	570 (18%)	\$86 (15%)
Non-confined fire	3,800 (3%)	90 (31%)	360 (11%)	\$81 (14%)
Confined fire	39,400 (34%)	0 (0%)	210 (6%)	\$4 (1%)
Cooking oil or other Class IIIB combustible liquid	35,300 (31%)	110 (40%)	1,660 (52%)	\$311 (54%)
Non-confined fire	11,100 (10%)	110 (40%)	1,250 (39%)	\$303 (52%)
Confined fire	24,200 (21%)	0 (0%)	410 (13%)	\$8 (1%)
Fat, grease, butter, margarine, or lard	24,300 (21%)	50 (18%)	790 (24%)	\$131 (23%)
Non-confined fire	5,900 (5%)	50 (18%)	600 (19%)	\$127 (22%)
Confined fire	18,400 (16%)	0 (0%)	190 (6%)	\$4 (1%)
Unclassified type of material first ignited	3,300 (3%)	0 (0%)	20 (1%)	\$5 (1%)
Non-confined fire	300 (0%)	0 (0%)	10 (0%)	\$5 (1%)
Confined fire	3,000 (3%)	0 (0%)	10 (0%)	\$0 (0%)
Plastic	2,600 (2%)	10 (2%)	40 (1%)	\$4 (1%)
Non-confined fire	400 (0%)	10 (2%)	30 (1%)	\$3 (1%)
Confined fire	2,200 (2%)	0 (0%)	10 (0%)	\$1 (0%)
Other known type of material	5,800 (5%)	20 (9%)	150 (5%)	\$44 (8%)
Non-confined fire	1,200 (1%)	20 (9%)	120 (4%)	\$43 (7%)
Confined fire	4,600 (4%)	0 (0%)	20 (1%)	\$1 (0%)
<b>Total fires</b>	<b>114,400 (100%)</b>	<b>280 (100%)</b>	<b>3,220 (100%)</b>	<b>\$581 (100%)</b>
Non-confined fire	22,700 (20%)	280 (100%)	2,370 (74%)	\$563 (97%)
Confined fire	91,700 (80%)	0 (0%)	850 (26%)	\$19 (3%)

Note: Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.

**Table 10. Death and Injury Rates per 1,000 Fires and Average Loss per Fire in Reported Home Cooking Fires That Began with Cooking Materials or Food for Leading Types of Material, 2014–2018 Annual Averages**

Type of Material Ignited	Fires	Deaths per 1,000 Fires	Injuries per 1,000 Fires	Average Loss per Fire
Food or starch, excluding fat or grease	43,100	2.0	13.1	\$1,900
Cooking oil or other Class IIIB combustible liquid	35,300	3.1	47.0	\$8,800
Fat, grease, butter, margarine, or lard	24,300	2.0	32.4	\$5,400
Other known types of material	11,200	2.6	17.7	\$4,600
<b>Total</b>	<b>114,800</b>	<b>2.4</b>	<b>28.2</b>	<b>\$5,100</b>

Note: Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.

**Table 11. Home Cooking Structure Fires by Extent of Flame Damage, 2014–2018 Annual Averages**

Extent of Flame Damage	Fires	Civilian Deaths	Civilian Injuries	Direct Property Damage (in Millions)
Confined fire identified by incident type	131,400 (76%)	0 (0%)	1,230 (25%)	\$30 (3%)
Confined to object of origin	6,300 (4%)	10 (2%)	290 (6%)	\$33 (3%)
Confined to room of origin	27,900 (16%)	140 (25%)	2,420 (50%)	\$441 (37%)
Confined to floor of origin	2,400 (1%)	100 (18%)	350 (7%)	\$147 (12%)
Confined to building of origin	4,600 (3%)	260 (47%)	470 (10%)	\$495 (41%)
Extended beyond building of origin	400 (0%)	50 (9%)	60 (1%)	\$50 (4%)
<b>Total</b>	<b>172,900 (100%)</b>	<b>550 (100%)</b>	<b>4,820 (100%)</b>	<b>\$1,196 (100%)</b>
Fire extended beyond room of origin	7,400 (4%)	400 (73%)	880 (18%)	\$693 (58%)

Note: Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.

**Table 12. Home Cooking Structure Fires by Equipment Involved in Ignition  
2014–2018 Annual Averages**

<b>Equipment Involved in Ignition</b>	<b>Fires</b>	<b>Civilian Deaths</b>	<b>Civilian Injuries</b>	<b>Direct Property Damage (in Millions)</b>
<b>Specific types of cooking equipment</b>	149,700 (87%)	550 (100%)	4,500 (93%)	\$1,190 (100%)
Non-confined fire	41,500 (24%)	550 (100%)	3,590 (75%)	\$1,166 (97%)
Confined fire	108,200 (63%)	0 (0%)	900 (19%)	\$24 (2%)
Range or cooktop	105,200 (61%)	480 (87%)	3,760 (78%)	\$858 (72%)
Non-confined fire	32,400 (19%)	480 (87%)	3,040 (63%)	\$840 (70%)
Confined fire	72,800 (42%)	0 (0%)	720 (15%)	\$18 (2%)
Oven or rotisserie	23,300 (13%)	20 (4%)	240 (5%)	\$54 (5%)
Non-confined fire	2,800 (2%)	20 (4%)	170 (3%)	\$51 (4%)
Confined fire	20,400 (12%)	0 (0%)	70 (1%)	\$4 (0%)
Portable cooking or warming device	7,700 (4%)	20 (4%)	220 (5%)	\$76 (6%)
Non-confined fire	2,000 (1%)	20 (4%)	160 (3%)	\$75 (6%)
Confined fire	5,700 (3%)	0 (0%)	60 (1%)	\$1 (0%)
Microwave oven	7,300 (4%)	10 (2%)	120 (3%)	\$40 (3%)
Non-confined fire	1,600 (1%)	10 (2%)	100 (2%)	\$39 (3%)
Confined fire	5,700 (3%)	0 (0%)	30 (1%)	\$1 (0%)
Grill, barbeque, or hibachi*	4,900 (3%)	10 (1%)	100 (2%)	\$135 (11%)
Non-confined fire	1,900 (1%)	10 (1%)	80 (2%)	\$135 (11%)
Confined fire	3,000 (2%)	0 (0%)	20 (0%)	\$0 (0%)
Deep fryer	800 (0%)	0 (1%)	20 (0%)	\$21 (2%)
Non-confined fire	400 (0%)	0 (1%)	20 (0%)	\$21 (2%)
Confined fire	400 (0%)	0 (0%)	0 (0%)	\$0 (0%)
Grease hood or duct exhaust fan	600 (0%)	0 (0%)	30 (1%)	\$6 (0%)
Non-confined fire	400 (0%)	0 (0%)	20 (0%)	\$5 (0%)
Confined fire	200 (0%)	0 (0%)	0 (0%)	\$0 (0%)
Confined cooking fire incident type but equipment involved was not primarily cooking equipment	23,200 (13%)	0 (0%)	320 (7%)	\$6 (0%)
Heating stove	17,900 (10%)	0 (0%)	220 (5%)	\$4 (0%)
Other known equipment involved in cooking fire	1,500 (1%)	0 (0%)	10 (0%)	\$1 (0%)
Coded as no equipment involved in confined cooking fire	3,900 (2%)	0 (0%)	90 (2%)	\$2 (0%)
<b>Total</b>	<b>172,900 (100%)</b>	<b>550 (100%)</b>	<b>4,820 (100%)</b>	<b>\$1,196 (100%)</b>
Non-confined fire	41,500 (24%)	550 (100%)	3,590 (75%)	\$1,166 (97%)
Confined fire	131,400 (76%)	0 (0%)	1,230 (25%)	\$30 (3%)

\*Grill, hibachi or barbecue fires that were coded as outside fires are not included here.

Note: Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.



**Table 13. Death and Injury Rates per 1,000 Reported Fires and Average Loss per Fire  
by Equipment Involved in Reported Home Cooking Fires  
2014–2018 Annual Averages**

<b>Equipment Involved</b>	<b>Fires</b>	<b>Civilian Deaths per 1,000 Fires</b>	<b>Civilian Injuries per 1,000 Fires</b>	<b>Average Loss per Fire</b>
Specific types of cooking equipment*	149,700	3.7	30.0	\$8,000
Range or cooktop	105,200	4.6	35.8	\$8,200
Oven or rotisserie	23,300	0.9	10.2	\$2,300
Portable cooking or warming equipment	7,700	3.1	28.5	\$9,900
Microwave oven	7,300	1.7	17.1	\$5,500
Grill, hibachi, or barbecue**	4,900	1.2	21.6	\$27,800
Deep fryer	800	5.4	25.9	\$27,200
Grease hood or duct exhaust fan	600	3.4	45.1	\$9,500
<b>Total cooking fires</b>	<b>172,900</b>	<b>3.2</b>	<b>27.9</b>	<b>\$6,900</b>
Non-confined fire	41,500	13.2	86.5	\$28,100
Confined fire	131,400	0.0	9.3	\$200

\*The 23,200 fires per year that had the confined cooking fire incident type, but in which the equipment involved in ignition was not coded as a type of cooking equipment, are not included here.

\*\*Grill, hibachi, or barbecue fires that were coded as outside fires are not included here.

Note: Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.

**Table 14. Comparative Risks of Reported Fires and Associated Losses of Gas Versus Electric Ranges**

**A. Input Data**

Annual Average of 2014–2018					
	Average US Households Using This Power as Primary Cooking Power (in Millions) in 2015 and 2017	US Home Structure Fires <u>Involving Range or Stove with This Power</u>			
		Fires	Civilian Deaths	Civilian Injuries	Direct Property Damage (in Millions)
Electricity	72.1	84,000	400	3,310	\$730
Gas	47.3	21,100	80	450	\$127
All	119.5	105,200	480	3,760	\$859

Note: “All” includes households with any cooking fuel, including fuels other than gas or electricity.

Source: Fire and loss estimates from NFIRS and NFPA fire experience survey. Primary cooking power data from *American Housing Survey (AHS) Table Creator*, accessed April 2020.

**B. Comparative United States Risk Relative to Usage**

	Fires per Million Households	Civilian Deaths per Million Households	Civilian Injuries per Million Households	Direct Property Damage per Household
Electricity	1,165	5.6	45.9	\$10.13
Gas	445	1.6	9.5	\$2.69
All	880	4.0	31.5	\$7.18

**Table 15. Home Cooking Structure Fires by Smoke Alarm Status  
2014–2018 Annual Averages**

<b>Smoke Alarm Status</b>	<b>Fires</b>	<b>Civilian Deaths</b>	<b>Civilian Injuries</b>	<b>Direct Property Damage (in Millions)</b>
<b>Total cooking fires</b>	172,900 (100%)	550 (100%)	4,820 (100%)	\$1,196 (100%)
Non-confined	41,500 (24%)	550 (100%)	3,590 (75%)	\$1,166 (97%)
Confined	131,400 (76%)	0 (0%)	1,230 (25%)	\$30 (3%)
<i>Smoke alarm present</i>	151,300 (88%)	380 (70%)	4,000 (83%)	\$1,011 (84%)
Non-confined	33,700 (19%)	380 (70%)	2,900 (60%)	\$983 (82%)
Confined	117,600 (68%)	0 (0%)	1,100 (23%)	\$27 (2%)
<i>Fire too small to operate alarm</i>	20,400 (12%)	20 (3%)	260 (5%)	\$18 (2%)
Non-confined	2,400 (1%)	20 (3%)	130 (3%)	\$16 (1%)
Confined	18,000 (10%)	0 (0%)	130 (3%)	\$2 (0%)
<i>Smoke alarm present and fire large enough to operate alarm</i>	130,900 (76%)	370 (67%)	3,740 (78%)	\$992 (83%)
Non-confined	31,300 (18%)	370 (67%)	2,770 (58%)	\$967 (81%)
Confined	99,600 (58%)	0 (0%)	970 (20%)	\$25 (2%)
<i>Smoke alarm operated</i>	118,900 (69%)	270 (50%)	3,150 (65%)	\$860 (72%)
Non-confined	26,700 (15%)	270 (50%)	2,300 (48%)	\$838 (70%)
Confined	92,100 (53%)	0 (0%)	860 (18%)	\$22 (2%)
<i>Smoke alarm present but did not operate</i>	12,100 (7%)	90 (17%)	580 (12%)	\$132 (11%)
Non-confined	4,600 (3%)	90 (17%)	470 (10%)	\$129 (11%)
Confined	7,500 (4%)	0 (0%)	110 (2%)	\$3 (0%)
<i>No smoke alarm</i>	21,600 (12%)	170 (30%)	820 (17%)	\$186 (16%)
Non-confined	7,800 (5%)	170 (30%)	690 (14%)	\$183 (15%)
Confined	13,800 (8%)	0 (0%)	130 (3%)	\$3 (0%)
<i>No working smoke alarm (sum of no smoke alarms and alarms that were present but did not operate)</i>	33,600 (19%)	260 (47%)	1,400 (29%)	\$318 (27%)
Non-confined	12,400 (7%)	260 (47%)	1,160 (24%)	\$312 (26%)
Confined	21,300 (12%)	0 (0%)	240 (5%)	\$6 (0%)

Note: Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS and NFPA fire experience survey.

**Table 16. Home Cooking Structure Fires by Sprinkler Status  
2014–2018 Annual Averages**

<b>Sprinkler Status</b>	<b>Fires</b>		<b>Civilian Deaths</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
<b>Total cooking fires</b>	172,900	(100%)	550	(100%)	4,820	(100%)	\$1,196	(100%)
Non-confined	41,500	(24%)	550	(100%)	3,590	(75%)	\$1,166	(97%)
Confined	131,400	(76%)	0	(0%)	1,230	(25%)	\$30	(3%)
<i>Sprinkler (not partial system) present in fire area</i>								
	17,600	(10%)	10	(1%)	390	(8%)	\$66	(6%)
Non-confined	2,700	(2%)	10	(1%)	210	(4%)	\$60	(5%)
Confined	14,900	(9%)	0	(0%)	190	(4%)	\$6	(1%)
<i>Fire too small to operate sprinkler</i>								
	11,500	(7%)	0	(1%)	180	(4%)	\$5	(0%)
Non-confined	800	(0%)	0	(1%)	80	(2%)	\$4	(0%)
Confined	10,700	(6%)	0	(0%)	100	(2%)	\$1	(0%)
<i>Sprinkler present and fire large enough to operate</i>								
	6,000	(3%)	0	(0%)	210	(4%)	\$61	(5%)
Non-confined	1,900	(1%)	0	(0%)	130	(3%)	\$56	(5%)
Confined	4,100	(2%)	0	(0%)	80	(2%)	\$5	(0%)
<i>Sprinkler operated</i>								
	5,500	(3%)	0	(0%)	190	(4%)	\$61	(5%)
Non-confined	1,900	(1%)	0	(0%)	120	(3%)	\$56	(5%)
Confined	3,600	(2%)	0	(0%)	70	(1%)	\$5	(0%)
<i>Sprinkler present but did not operate</i>								
	600	(0%)	0	(0%)	20	(0%)	\$0	(0%)
Non-confined	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Confined*	500	(0%)	0	(0%)	20	(0%)	\$0	(0%)
<i>Unclassified sprinkler operation</i>								
	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Non-confined	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
Confined	0	(0%)	0	(0%)	0	(0%)	\$0	(0%)
<i>Partial automatic extinguishing system (AES) or not in area and did not operate</i>								
	900	(1%)	0	(0%)	20	(1%)	\$5	(0%)
Non-confined	200	(0%)	0	(0%)	20	(0%)	\$5	(0%)
Confined	700	(0%)	0	(0%)	0	(0%)	\$0	(0%)

\*It is likely that many of the confined fires in which sprinklers did not operate never grew large enough to activate the sprinkler.

**Table 16. Home Cooking Structure Fires by Sprinkler Status  
2014–2018 Annual Averages (Continued)**

<b>Sprinklers Status</b>	<b>Fires</b>		<b>Civilian Deaths</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
<i>No automatic extinguishing system (AES)</i>	153,300	(89%)	540	(98%)	4,370	(91%)	\$1,124	(94%)
Non-confined	38,400	(22%)	540	(98%)	3,340	(69%)	\$1,100	(92%)
Confined	114,900	(66%)	0	(0%)	1,030	(21%)	\$24	(2%)
<i>Non-sprinkler automatic extinguishing system (AES) present</i>	1,100	(1%)	0	(0%)	30	(1%)	\$1	(0%)
Non-confined	200	(0%)	0	(0%)	20	(0%)	\$1	(0%)
Confined	900	(1%)	0	(0%)	10	(0%)	\$0	(0%)
<i>No working sprinkler (sum of no AES and sprinklers that were present but did not operate)</i>	153,900	(89%)	540	(98%)	4,390	(91%)	\$1,124	(94%)
Non-confined	38,400	(22%)	540	(98%)	3,340	(69%)	\$1,101	(92%)
Confined	115,500	(67%)	0	(0%)	1,040	(22%)	\$24	(2%)

Note: Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.

**Table 17. Home Cooking Structure Fire Casualties by Victim’s Location at Time of Incident  
2014–2018 Annual Averages**

<b>Victim’s Location at Time of Incident</b>	<b>Civilian Deaths</b>	<b>Civilian Injuries</b>
In area of origin and not involved	60 (10%)	1,360 (28%)
Not in area of origin and not involved	270 (48%)	1,030 (21%)
Not in area of origin but involved	120 (21%)	570 (12%)
In area of origin and involved	110 (20%)	1,820 (38%)
Unclassified	0 (0%)	30 (1%)
<b>Total</b>	<b>550 (100%)</b>	<b>4,820 (100%)</b>
Involved in ignition, regardless of location	230 (42%)	2,400 (50%)
In area of origin, regardless of involvement	170 (30%)	3,180 (66%)

Note: Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.

**Table 18.  
Home Cooking Structure Fire Casualties by Victim’s Activity at Time of Injury  
2014–2018 Annual Averages**

<b>Victim’s Activity at Time of Injury</b>	<b>Civilian Deaths</b>	<b>Civilian Injuries</b>
Escaping	170 (32%)	810 (17%)
Sleeping	150 (28%)	330 (7%)
Unable to act	70 (13%)	160 (3%)
Fire control	50 (9%)	2,520 (52%)
Unclassified activity	40 (8%)	340 (7%)
Returning to vicinity of fire before control	20 (4%)	350 (7%)
Rescue attempt	20 (3%)	160 (3%)
Irrational act	20 (3%)	120 (2%)
Returning to vicinity of fire after control	0 (0%)	20 (0%)
<b>Total</b>	<b>550 (100%)</b>	<b>4,820 (100%)</b>

Note: Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Source: Data from NFIRS Version 5.0 and NFPA fire experience survey.

**Table 19. US Civilian Fire Deaths and Injuries Reported in Home Cooking Fires by Age Group  
2014-2018 Annual Averages**

Age Group	2014–2018 Population in Millions		Civilian Deaths		Deaths per Million	Relative Risk of Death	Civilian Injuries		Injuries per Million	Relative Risk of Injury
Under 5	20	(6%)	30	(6%)	1.6	1.0	140	(3%)	7.0	0.5
5–9	20	(6%)	30	(5%)	1.3	0.7	70	(1%)	3.5	0.2
10–14	21	(6%)	20	(3%)	0.8	0.5	140	(3%)	7.0	0.5
15–19	21	(7%)	10	(2%)	0.4	0.2	270	(6%)	12.6	0.8
20–24	22	(7%)	20	(4%)	1.0	0.6	460	(10%)	20.6	1.4
25–34	45	(14%)	70	(13%)	1.6	0.9	900	(19%)	20.2	1.4
35–44	41	(13%)	50	(10%)	1.3	0.8	760	(16%)	18.6	1.2
45–54	43	(13%)	60	(11%)	1.4	0.8	720	(15%)	16.9	1.1
55–64	41	(13%)	100	(19%)	2.5	1.5	640	(13%)	15.6	1.0
65–74	29	(9%)	60	(11%)	2.2	1.3	380	(8%)	13.3	0.9
75–84	14	(4%)	40	(7%)	2.5	1.5	210	(4%)	14.8	1.0
85+	6	(2%)	60	(11%)	9.4	5.5	120	(3%)	19.8	1.3
<b>Total</b>	<b>323</b>	<b>(100%)</b>	<b>550</b>	<b>(100%)</b>	<b>1.7</b>	<b>1.0</b>	<b>4,820</b>	<b>(100%)</b>	<b>14.9</b>	<b>1.0</b>
<b>Selected Age Groups:</b>										
14 and under	61	(19%)	70	(14%)	1.2	0.7	350	(7%)	5.8	0.4
55 and over	91	(28%)	260	(47%)	2.9	1.7	1,350	(28%)	14.9	1.0
65 and over	49	(15%)	160	(29%)	3.2	1.9	720	(15%)	14.6	1.0

Note: Sums may not equal totals due to rounding errors. Unknowns have been allocated proportionally.

Sources: Data from NFIRS Version 5.0, the NFPA fire experience survey, and the US Census American Community Survey.

## Methodology

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The statistics in this analysis are estimates derived from the US Fire Administration's [National Fire Incident Reporting System \(NFIRS\)](#) and the NFPA's annual survey of US fire departments. Fires reported to federal or state fire departments or industrial fire brigades are not included in these estimates.

Only civilian (non-firefighter) casualties are discussed in this analysis.

NFPA's Fire Experience Survey provides estimates of the big picture. NFIRS is a voluntary system through which participating fire departments report detailed factors about the fires to which they respond. To compensate for fires reported to local fire departments but not captured in NFIRS, a scaling ratio was calculated and then applied to the NFIRS database using the formula below:

$$\frac{\text{NFPA's Fire Experience Survey projections}}{\text{NFIRS totals}}$$

Cooking equipment refers to equipment used to cook, heat, or warm food [NFIRS equipment involved in ignition (EII) Codes 630-649 and 654]. Fires in which ranges, ovens or microwave ovens, food warming appliances, fixed or portable cooking appliances, deep fat fryers, open-fired charcoal or gas grills, grease hoods or ducts, or other cooking appliances were involved in the ignition are classified as being caused by cooking equipment. Food preparation devices that do not involve heating, such as can openers or food processors, are not included here.

All fires with incident type Code 113, "Cooking fire in or on a structure and confined to the vessel of origin," were considered cooking fires regardless of the equipment involved in ignition. Fires with other confined fire incident types were excluded from the analysis.

NFIRS 5.0 originally defined EII as the piece of equipment that provided the principal heat source that caused ignition if the equipment malfunctioned or was used improperly. NFPA noticed that many fires in which EII was coded as None (NNN) had other causal factors that indicated equipment was a factor or were completely unknown. To compensate, NFPA treats fires in which EII = NNN and the heat source is not in the range of 40-99 as an additional unknown.

To allocate unknown data for EII, the known data is multiplied by:

$$\frac{\text{All fires}}{(\text{All fires} - \text{blank} - \text{undetermined} - [\text{fires in which EII} = \text{NNN and heat source} < 40-99])}$$

In addition, fires and losses associated with code EII 600, "Kitchen and cooking equipment, other," were allocated proportionally across specific kitchen and equipment codes, such as EII codes 611-699. Equipment that is totally unclassified is not allocated further. Unfortunately, equipment that is truly different can erroneously be assigned to other categories.

For more information on the methodology used for this report, see [How NFPA's National Estimates Are Calculated for Home Structure Fires](#).

## Acknowledgements

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The National Fire Protection Association thanks all the fire departments and state fire authorities who participate in the NFIRS and the annual NFPA Fire Experience Survey. These firefighters are the original sources of the detailed data that make this analysis possible. Their contributions allow us to estimate the size of the fire problem.

We are also grateful to the US Fire Administration for its work in developing, coordinating, and maintaining NFIRS.

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