

FIREWORKS

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Abstract

In 2009, 8,800 fireworks-related injuries were treated in U.S. hospital emergency rooms. The trend in fireworks-related injuries has been mostly in the range of 8,300 to 9,800 since 1996, except for spikes in 2000, primarily due to celebrations around the advent of a new millennium, and in 2004, and a sharp drop in 2008. The highest injury rates were for children aged 10 to 14. In 2009, an estimated 18,000 reported fires were started by fireworks. These fires resulted in no reported civilian deaths, 30 civilian injuries and \$38 million in direct property damage. In 2009, five out of six (84%) emergency room fireworks injuries involved fireworks that Federal regulations permit consumers to use. The risk of fire death relative to exposure shows fireworks to be more risky per hour of use than cigarettes.

Keywords: Fireworks, sparkler, fire statistics, NFIRS, NEISS

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For more information about the National Fire Protection Association, visit www.nfpa.org or call 617-770-3000. To learn more about the One-Stop Data Shop go to www.nfpa.org/osds or call 617-984-7443.

Copies of this report are available from:

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Executive Summary

In 2009, 8,800 fireworks-related injuries were treated in U.S. hospital emergency rooms. The trend in fireworks-related injuries has been mostly in the range of 8,300 to 9,800 since 1996, except for spikes in 2000, primarily due to celebrations around the advent of a new millennium, and in 2004, and a sharp drop in 2008. Injuries were higher in 1984-1995 than in 1996 and later years.

In 2009, an estimated 18,000 reported fires were started by fireworks. These fires resulted in no reported civilian deaths, 30 civilian injuries and \$38 million in direct property damage.

During 2005-2009, the largest numbers of outdoor fires associated with fireworks involved grass fires (9,400 per year), brush fires (6,000), dumpster fires (2,200), unclassified or unknown-type natural vegetation fires (1,700), and outside trash, rubbish, or waste fires (1,500).

In 2005-2009, three people per year were killed in fires started by fireworks, while six people per year were killed

directly by fireworks. These estimates may overlap, because fireworks can directly kill someone while also starting a fatal fire.

Two of five (39%) victims of fireworks injuries in 2009 were under age 15. The highest rates of injuries per million population were for children aged 10 to 14. Males accounted for nearly three-fourths (73%) of fireworks injuries.

The majority (53%) of 2009 fireworks injuries were to extremities – hand or finger (32%), leg (12%), and arm, shoulder, or wrist (9%). Most of the rest (42% of total) were to parts of the head, including the eye (27% of total).

In 2009, five out of six (84%) emergency room fireworks injuries involved fireworks that Federal regulations permit consumers to use.

The risk of fire death relative to exposure shows fireworks to be more risky per hour of usage than cigarettes.

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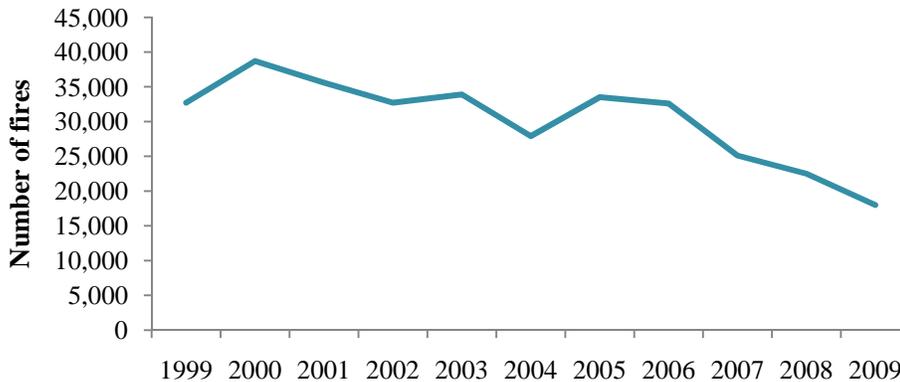
Fireworks

Size of the Fireworks Problem

On Independence Day in a typical year, far more U.S. fires are reported than on any other day, and fireworks account for more than half of those fires, more than any other cause of fires.

- In 2009, fireworks caused an estimated **18,000** reported fires, including **1,300** structure fires, **400** vehicle fires, and **16,300** outside and other fires.
- These fires resulted in **no reported** deaths, and an estimated **30** civilian injuries and **\$38 million** in direct property damage.

Reported Fires Associated with Fireworks, 1999-2009

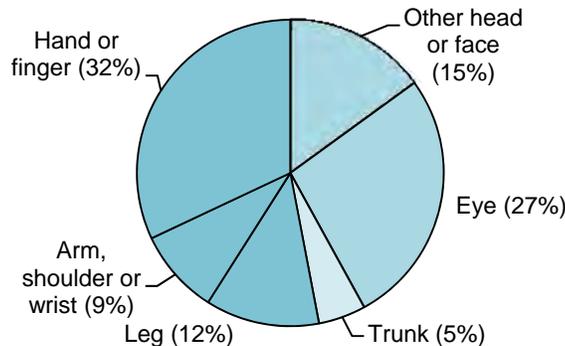


FACT: 700 home structure fires were caused by fireworks in 2009.

Characteristics of Fireworks Injuries

In 2009, U.S. hospital emergency rooms treated an estimated **8,800** people for fireworks related injuries.

Figure 2.
2009 Fireworks-Related Injuries*
By Part of Body Injured



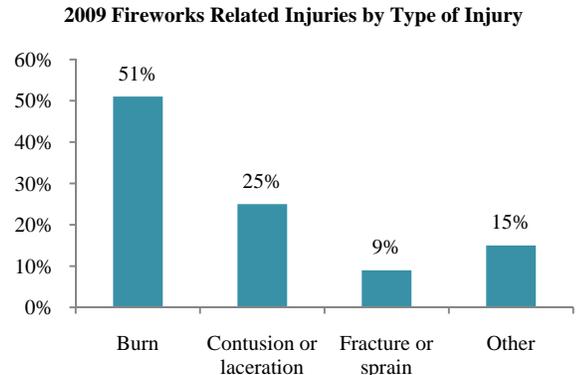
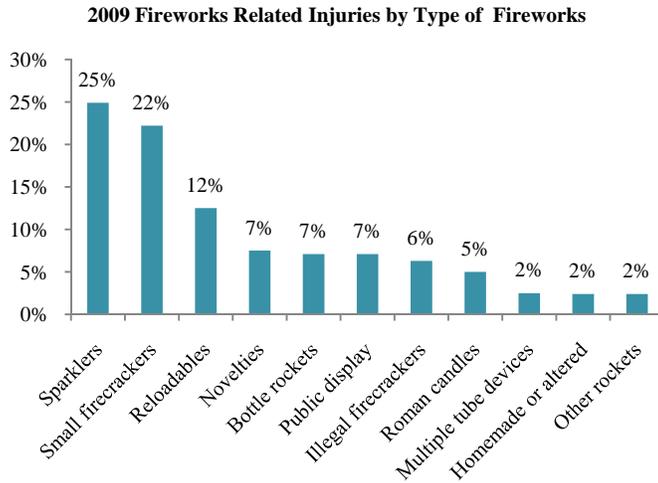
FACT: Males accounted for **73%** of fireworks injuries in 2009.

Source: CPSC's NEISS

* Based on injuries during the month around July 4 Note: Shaded dark teal areas are extremities (53% of total) and lightly shaded teal areas are parts of the head (42% of total).

Characteristics of Fireworks Injuries Continued

- **Half (51%)** of the 2009 fireworks injuries were burns, while one-quarter (**25%**) were contusions and lacerations.
- **Two of five (39%)** people injured by fireworks were under the age of 15.
- The risk of fireworks injury was highest for children ages 10-14 with more than twice the risk for the general population.
- Sparklers and novelties alone accounted for **32%** of the emergency room fireworks injuries in 2009.



FACT: 84% of the fireworks injuries treated in hospital emergency rooms involved fireworks that Federal regulations permit consumers to use.

Risk of Private Fireworks Use

The risk of fire death relative to time used shows fireworks as the riskiest consumer product.

- The risk that someone will die from fire when fireworks are being used is higher relative to exposure time than the risk of fire death when a cigarette is being smoked.
- The risks with fireworks are **not** limited to displays, public or private. Risks also exist wherever fireworks are **manufactured, transported, stored or sold**.
- **“Safe and sane”** fireworks are neither. Fireworks and sparklers are designed to explode or throw off showers of hot sparks. Temperatures may exceed 1200°F.



FACT: The following four states have banned access by the public to all fireworks:
Delaware, Massachusetts, New Jersey and New York

NFPA encourages people to enjoy public displays of fireworks that comply with NFPA 1123. NFPA is strongly opposed to any consumer use of fireworks.



Fireworks Safety

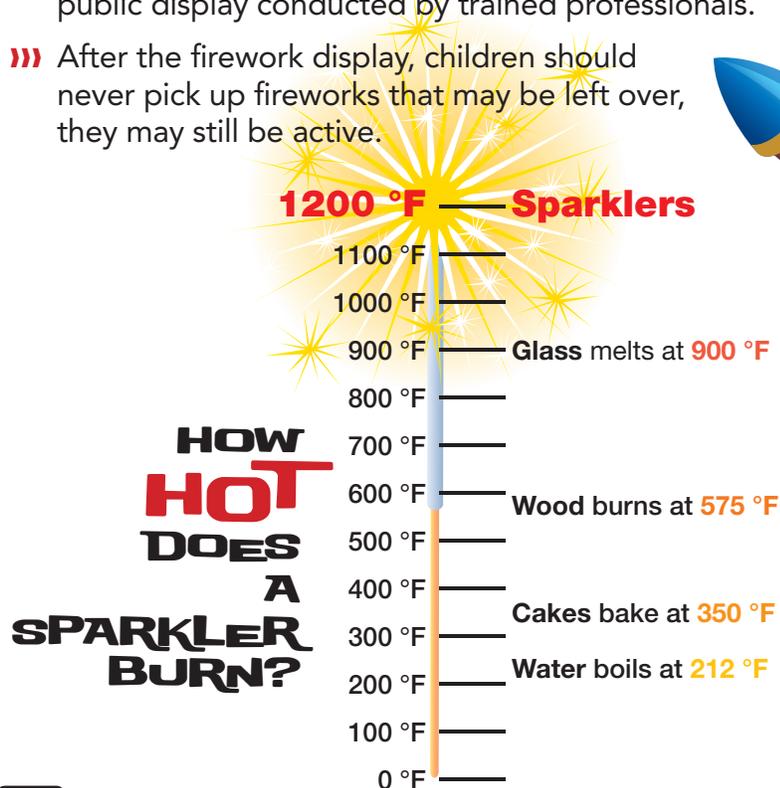
Fireworks during the Fourth of July are as American as apple-pie, but did you know that more fires are reported on that day than on any other day of the year in the United States? Nearly half of these fires are caused by fireworks. The good news is you can enjoy your holiday and the fireworks, with just a few simple safety tips:

PROCEED WITH CAUTION!

- »»» Leave fireworks to the professionals. Do not use consumer fireworks.
- »»» The safest way to enjoy fireworks is to attend a public display conducted by trained professionals.
- »»» After the firework display, children should never pick up fireworks that may be left over, they may still be active.

CONSUMER FIREWORKS

include sparklers and firecrackers. The tip of a sparkler burns at a temperature of more than **1,200 degrees Fahrenheit**, which is hot enough to cause third-degree burns.



FACTS

- ! Each July Fourth, thousands of people, most often children and teens, are injured while using consumer fireworks.
- ! The risk of fireworks injury is more than twice as high for children ages 10–14 as for the general population.



Your Source for SAFETY Information

NFPA Public Education Division • 1 Batterymarch Park, Quincy, MA 02169

www.nfpa.org/education

NFPA's Fire Safety Resources

NFPA's wealth of fire-related research includes investigations of technically significant fire incidents, statistical analysis of fire experience data, and the Charles S. Morgan Technical Library, one of the most comprehensive fire literature collections in the world. In addition, NFPA's Fire Protection Research Foundation is a source of independent fire test data. Find out more at:

www.nfpa.org/research

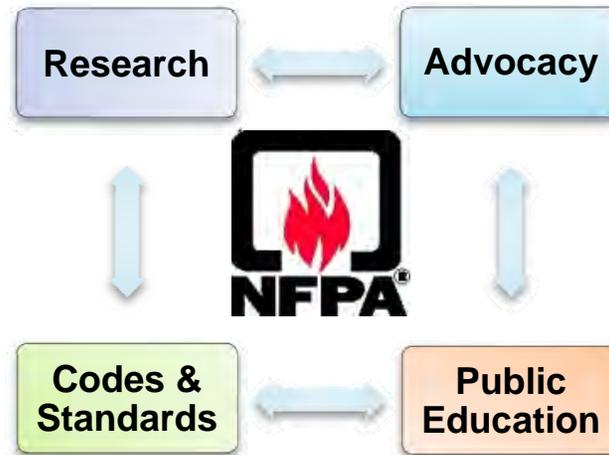
NFPA also develops, publishes, and disseminates more than 300 consensus codes and standards intended to minimize the possibility and effects of fire and other risks. Among these are:

[NFPA1: Fire Code:](#)

[NFPA 101: Life Safety Code®:](#)

[NFPA 1123: Code for Fireworks Display:](#)

For more than a century, NFPA has advocated an end to the dangerous private use of fireworks, which accounts for nearly all of the injuries from fireworks in most years. Many states still permit untrained citizens to purchase and use fireworks. The thousands of serious injuries and extensive property loss nearly all arise from this misguided activity, rather than the only acceptably safe way to enjoy fireworks, which is in public fireworks displays. Anything else is inconsistent with IFMA's (International Fire Marshals Association's) *Model Fireworks Law*, which reflects NFPA's zero-tolerance policy for consumer use of fireworks. More information may be found at www.nfpa.org/fireworks.



[For consumers:](#) NFPA has consumer safety information regarding causes, escape planning, fire & safety equipment, and many other topics.

[For Kids:](#) Sparky.org has important information for kids delivered via fun games, activities, and cartoons.

[For public educators:](#) Resources on fire safety education programs, educational messaging, grants & awards, and many other topics.