

# **CHARACTERISTICS OF HOME FIRE VICTIMS**

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## **Abstract**

Children under age 5 are almost one and a half times as likely to die in a home fire as the average person, but their relative risk has been declining over time. Adults over the age of 65 are more than twice as likely to die in home fires as the average person. Alcohol or other drugs, disabilities and age-related limitations are all factors in the risk of home fire death.

Keywords: fire statistics, older adults, children, home fires, fire victims, residential fires, burns, smoke inhalation, fire deaths

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## EXECUTIVE SUMMARY

### Patterns by Age, Sex, Race, Ethnicity, and Region

The very young and the very old are at highest risk of death from home fires. Based on 2003-2007 experience data, children under age 5 are almost one and a half times as likely to die in a home fire as the general public. Older adults age 75 or over are nearly three times as likely to die as the general public. Risk increases with age. Adults 85 and over have more than three and a half times the risk of fire death as the general public.

Adults age 20 to 49 have the highest risk of reported non-fatal injury from home fires. Based on 2003-2007 experience, adults between 20-34 years old have a risk of injury almost 30% above the all-ages average. Adults between 35-49 years old have a risk of injury that is 17% higher than the all-ages average. Children in any age group have below-average or average risk of home fire injury, however, risk of injury increases from age 10 and up.

From 1980 to 2007, the share of home fire deaths accounted for by children under age 5 declined from 18% to 9%, while the share of older adults age 65 and over increased from 19% to 29%. The numbers of deaths and injuries for all age groups also declined from 1980, except for injuries in the age 35-49 and 50-64 groups, which increased slightly. The relative risk index for home fire deaths for children under age 5 has declined sharply since 1994, when the U.S. Consumer Product Safety Commission (CPSC) instituted requirements for child resistance in lighters.

In the U.S., males have a 29% higher risk of home fire death than females and a 16% higher risk of non-fatal home fire injury.

Seventy-one percent of the people who died of unintentional fire or flame injuries were white, while 23% were black. Black individuals faced a risk of fire death almost twice that of an individual of another race.

The Midwest region shows the highest risk for individuals dying in a home structure fire, followed by the South. Rural communities have the highest fire death rates in the nation.

### Leading Causes of Fire

Smoking materials have historically caused the largest share of civilian deaths in home structure fires even though they account for 5% of the home structure fires. In home structure fires that result from smoking materials, adults over the age of 50 have the highest risk of dying.

Cooking equipment continues to be the leading cause of civilian fire injuries. People age 20-34 have a 50% higher chance of being injured in a cooking fire than does the general public of all ages.

Children under the age of 5 are almost eight times as likely to die in a fire caused by playing with heat source than are people of all ages.

### **Risk Factors**

The majority of U.S. home fatal and non-fatal fire victims were in the area of fire origin when the fire began.

As age of victim increases, physical disabilities are cited much more frequently than other factors that contribute to injury.

More than one of every three (36%) fatal fire victims never wakes up before being injured. More than two of every five (43%) people injured (but not killed) in home fires were trying to fight the fire or rescue someone when they were injured.

Males are more likely than females to be attacking the risk (by fighting the fire or trying to rescue others from it) when injured, while females are more likely than males to be escaping the fire when injured.

### **Fatal Effects of Fire**

Fire deaths due to toxic gases and/or oxygen deprivation, collectively called smoke inhalation, outnumber fire deaths due to burns. As of 1999 and later years, the smoke inhalation to burns ratio was 2-to-1, according to death certificate analysis. See Appendix D.



## Characteristics of Home Fire Victims Fact Sheet

In the U.S., based on 2003-2007 experience data,

- The very young and the very old are at highest risk of death from home fires.
- Males are at a higher risk of death and injury from home fires than females.
- Black individuals are at a higher risk of death from home fires than Whites or Hispanics, who are at higher risk than Asian-Americans.

Estimates are derived from the U.S. Fire Administration National Fire Incident Reporting System (NFIRS) Version 5.0 and NFPA's annual fire department experience survey.



While children under the age of 5 and adults 65 and older are at highest risk for fire deaths and injuries, half (51%) of the home fire victims were between 20 and 64 years old.

From 1980 to 2007, the share of home fire deaths accounted for by

- Children under age 5 declined from 18% to 9%
- Older adults age 65 and over increased from 19% to 29%

Adults age 20 to 49 have the highest risk of reported non-fatal injury from home fires.

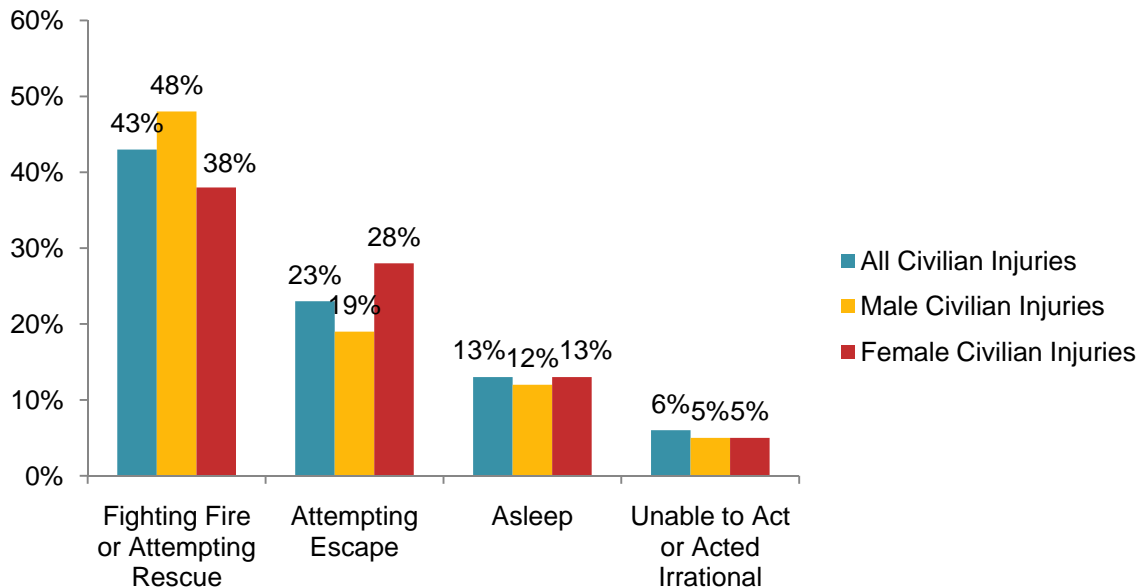
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The majority of U.S. home fatal and non-fatal fire victims were in the area of fire origin when the fire began.

More than one of every three (36%) fatal fire victims never wakes up before being injured.



### Civilian Fire Injuries in Homes by Activity when Injured and Sex of Victim



- More than two of every five (43%) people injured (but not killed) in home fires were trying to fight the fire or rescue someone when they were injured.
- Males are more likely than females to be fighting the fire or trying to rescue others from it when injured, while females are more likely than males to be escaping the risk when injured.

In home fires caused by cooking equipment, adults 85 and older are at highest risk of death in fires caused by cooking equipment, with a risk rating 4.5 times that of the general public.

Children under the age of 5 are almost eight times as likely to die in fire caused by playing with heat source than the general public.