

# Hot Topics

## Fireworks-Related Injuries



### How can fireworks injuries be prevented?

- The safest way to prevent fireworks-related injuries is to leave fireworks displays to trained professionals.

### How big is the problem?

- In 2006, eleven people died and an estimated 9,200 were treated in emergency departments for fireworks-related injuries in the United States.<sup>1</sup>
- An estimated 5% of fireworks-related injuries treated in emergency departments required hospitalization.<sup>1</sup>

### Who is most at risk for fireworks-related injuries?

- More than two-thirds of all fireworks-related injuries in 2006 occurred between June 16 and July 16. During that time period:
  - one out of every three people injured were children under 15 years of age;
  - about three times as many males were injured as females; and
  - young people under twenty sustained nearly half (47%) of all injuries from fireworks.<sup>1</sup>
- People actively participating in fireworks-related activities are more frequently and severely injured than bystanders.<sup>2</sup>

### What kinds of injuries occur?

- Between June 16 and July 16, 2006:

- The body parts most often injured were hands (2,300 injuries), eyes (1,500 injuries), and the head, face, and ear (1,400 injuries).<sup>1</sup>
- More than half of the injuries were burns. Burns were the most common injury to all body parts except the eyes and head areas, where contusions, lacerations and foreign bodies in the eye occurred more frequently.<sup>1</sup>
- Fireworks can be associated with blindness, third degree burns, and permanent scarring.<sup>2</sup>
- Fireworks can also cause life-threatening residential and motor vehicle fires.<sup>1</sup>

### What types of fireworks are associated with most injuries?

- Between June 16 and July 16, 2006:
  - Firecrackers were associated with the greatest number of estimated injuries at 1,300. There were 1,000 injuries associated with sparklers and 800 associated with rockets.<sup>1</sup>
  - Sparklers accounted for one-third of the injuries to children less than 5 years of age.<sup>1</sup>
- Between 2000-2005, more than one-third of the fireworks-related deaths involved professional devices that were illegally sold to consumers.<sup>3</sup>



### How and why do these injuries occur?

- **Availability:** In spite of federal regulations and varying state prohibitions, many types of fireworks are still accessible to the public. Distributors often sell fireworks near state borders, where laws prohibiting sales on either side of the border may differ.
- **Fireworks type:** Among the various types of fireworks, some of which are sold legally in some states, bottle rockets can fly into peoples' faces and cause eye injuries; sparklers can ignite clothing (sparklers burn at more than 1,000°F); and firecrackers can injure the hands or face if they explode at close range.
- **Being too close:** Injuries may result from being too close to fireworks when they explode; for example, when someone leans over to look more closely at a firework that has been ignited, or when a misguided bottle rocket hits a nearby person.
- **Lack of physical coordination:** Younger children often lack the physical coordination to handle fireworks safely.
- **Curiosity:** Children are often excited and curious around fireworks, which can increase their chances of being injured (for example, when they re-examine a firecracker dud that initially fails to ignite).
- **Experimentation:** Homemade fireworks (for example, ones made of the powder from several firecrackers) can lead to dangerous and unpredictable explosions.<sup>4</sup>

### What is the annual cost of fireworks-related injuries?

- An estimated 2,200 reported structure or vehicle fires were started by fireworks in 2004. These fires resulted in \$21 million in direct property damage.<sup>5</sup>

### **What are the laws?**

- Under the Federal Hazardous Substances Act, the U.S. Consumer Product Safety Commission prohibits the sale of the most dangerous types of fireworks and the components intended to make them. The banned fireworks include various large aerial devices, M-80s, quarter-sticks, half-sticks and other large firecrackers. Any firecracker with more than 50 milligrams of explosive powder and any aerial firework with more than 130 milligrams of flash powder is banned under federal law, as are mail order kits and components designed to build these fireworks.<sup>6</sup>

**Information taken from:**  
**<http://www.cdc.gov/ncipc/factsheets/fworks.htm>**