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# ENJOY HOLIDAY FIREWORKS SAFELY

**F**ireworks displays are the high point of Independence Day celebrations for many of us. The explosion of bright colors and sounds in the night, symbolizing our Revolutionary War firepower against the British, delight both young and old each year.

All it takes, however, is one defective firecracker, a bottle rocket flying in an unexpected direction or the careless twirl of a lit sparkler to cause a sight-threatening eye injury and ruin a July 4th party.

Each year, thousands of Americans visit emergency rooms for treatment of fireworks-related injuries. Children are the most frequent victims, with those under age 15 accounting for 40% of all injuries. In 2008 approximately 1,000 people suffered eye injuries caused by fireworks. For about one-quarter of that group, permanent vision loss or blindness resulted.

## How Accidents Happen

The U.S. Consumer Product Safety Commission regulates fireworks that can be sold legally to consumers and is responsible for setting minimum standards. These regulations and standards have helped make them safer, but all fireworks are potentially hazardous. A gust of wind, for example, can topple fireworks, spewing sparks or debris into the eyes of whoever is nearby.

Sparklers, which are legal in most states, can burn at up to 1,800° F., hot enough to cause third-degree burns. In the dark, it can be difficult to estimate the distance between the end of a lit sparkler and a person's face. Some younger children may lack the coordination to handle sparklers safely. Often considered a "safe" firework, sparklers are the No. 1 cause of all fireworks injuries in both adults and children.

Firecrackers can cause eye injuries if they erupt at close range. Someone

who inspects a firecracker that failed to go off, for example, could be the victim of a delayed explosion.

Bottle rockets are responsible for some of the most serious eye injuries. They may fly erratically and explode in someone's face, causing eyelid lacerations, corneal abrasions, traumatic cataract, retinal detachment, optic nerve damage, eyeball rupture, eye muscle damage or complete blindness

## Be a Spectator

The safest way to enjoy fireworks is to attend a public display conducted by trained pyrotechnicians. Prevent

Blindness America, the American Academy of Ophthalmologists and the National Fire Protection Association agree that it is best to leave the lighting of fireworks to professionals. The Academy recommends these additional safety tips:

- Never let children play with fireworks of any type.
- View fireworks from at least 500 feet away, or up to a quarter of a mile for best viewing.
- Respect safety barriers set up to allow pyrotechnicians to do their jobs safely.

- Follow directives given by event ushers or public safety personnel.
- If you find unexploded fireworks, do not touch them. Immediately contact your local fire or police department.
- If you get an eye injury from fireworks, seek medical help immediately. (See box.)

*Sources: American Academy of Ophthalmology, National Centers for Disease Control and Prevention, Prevent Blindness America, National Fire Protection Association*

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## If you are injured

The American Academy of Ophthalmology recommends the following for all eye injuries:

- Do not touch, rub or apply pressure to the eye.
- Do not try to remove an object stuck in the eye.
- Do not apply ointment or medication to the eye.
- See a doctor as soon as possible, preferably an ophthalmologist.

If the eye has been cut or punctured by flying debris:

- Gently place a shield over the eye. The bottom of a paper cup or juice carton taped to the bones surrounding the eye can serve as a shield until you get medical attention.
- Do not rinse with water.
- Do not remove an object stuck in the eye.
- Do not rub or apply pressure to the eye.
- Avoid giving aspirin, ibuprofen or other non-steroidal, anti-inflammatory drugs. These drugs thin the blood and may increase bleeding.
- After you have finished protecting the eye, see a physician immediately.

If you get a particle of foreign material in your eye:

- Do not rub the eye.
- Lift the upper eyelid over the lashes of your lower lid.
- Blink several times and allow tears to flush out the particle.
- If the particle remains, keep your eye closed and seek medical attention.

