Off the Job Safety: Fireworks – US Special Report



Fireworks Aren’t Just Fun & Games

When July rolls around, you can almost feel the excitement in the air—long summer evenings, backyard barbecues, and the unmistakable crackle of fireworks being readied for launch. I’ll never forget one Fourth of July a few years back when my neighbor, Dan, decided to “help” by holding the next firecracker in his hand while lighting it. He backed away, laughed, and then—almost in slow motion—threw the spent casing aside. Seconds later, his shirt caught a spark. Luckily, he only suffered a minor burn, but that instant of surprise and pain was enough to remind everyone nearby that fireworks aren’t just fun and games.

That moment with Dan illustrates why we need to talk about the real risks behind those colorful explosions. In 2023, the U.S. Consumer Product Safety Commission estimated about 9,700 Americans were treated in emergency departments for fireworks-related injuries– and reported eight tragic deaths. Five of those fatalities were tied to misuse, two to device malfunctions, and one remains under investigation.1 2 Even though injury rates dipped slightly from 2022, the long-term trend—from 2008 to 2023—shows an average increase of 561 injuries per year.3

You might hear people say, “It’s just a harmless sparkler,” but the data begs to differ. Nearly 42 percent of those injuries last year were burns, and hands and fingers bore the brunt about 35 percent of the time, followed by the head, face, and ears at around 22 percent.4 5 Imagine a teenager—research shows those aged 15 to 19 have the highest injury rates– distracted by friends, holding a sparkler a little too close to their sleeve, and finding themselves with a painful burn that could have lifelong consequences. Children aged 5 to 9 not far behind, often fascinated by the bright sparks, are second in line for emergency-room visits.4

Beyond burns, we see deep cuts and punctures when a malfunctioning device sends metal fragments flying, and terrifying eye injuries when embers hit unprotected eyes. The deafening bang of a mortar shell can easily exceed 150 decibels—enough to cause permanent hearing damage if you’re standing too close. Some injuries even result from the shock of the blast, with people thrown off balance and sustaining fractures or head trauma.

So, how do we keep our celebrations joyful rather than stressful? First, consider attending a professional display. Licensed pyrotechnicians train for years to manage fallout zones, calculate safe distances, and handle misfires. You get the same

stunning show without the worry.

If you're lighting consumer fireworks at home, think of it as prepping for a small construction project. You wouldn't build a deck without reading the instructions and gathering tools—so don't light fireworks without knowing exactly how they're meant to go off. Always buy from reputable, licensed retailers and double-check that each firework is intact, with no exposed wiring or broken components. Treat packaging like a mini-manual: when in doubt, read it twice.

Picture your backyard transformed into a "launch site" rather than a living space. Clear away lawn chairs, dry leaves, and that stray grill cover. Place each device on a flat, stable surface—bucket of sand or a block of concrete works wonders to keep those rockets from veering sideways. And designate a "spectator zone" well back—at least 25 to 100 feet, depending on the size of the firework.

When it's time to light that fuse, use a long-stem lighter or a punk—never hold a match or standard lighter close to the end. Strike, step back immediately, and watch the show. If you're moving between devices, keep water handy: buckets, a garden hose, even a fire extinguisher in extreme drought conditions. After you hear that satisfying pop and see the burst of color, resist the urge to walk straight over. Fuses can smolder for minutes—you'll want to let spent shells cool for at least 15 to 20 minutes before you approach. Then, soak them thoroughly in water before tossing them in the trash.

I once met a fire captain who told me he's responded to calls where families tried to relight "duds" just minutes after they fizzled out. One of those missteps led to a device misfire that tore off a pair of fingers and sent a 12-year-old to the hospital. If a firework doesn't go off, let it sit—20 minutes or more—then submerge it in water. It's a small step that could save a lifetime of regret.

Protective gear isn't just for the pros. Safety goggles rated to ANSI standards shield your eyes from stray embers, and simple earplugs can muffle a shockingly loud burst. Thick leather-palm gloves give your hands a fighting chance against sparks, and long sleeves of non-synthetic, non-flimsy fabrics can prevent embers from setting your clothing alight.

We can't forget our four-legged family members. Dogs and cats often bolt in fear when fireworks go off. Before you light anything, bring pets indoors, close windows, and create a quiet, safe nook with familiar blankets and soft music. It spares them stress and keeps them from darting into traffic or out of the yard in panic.

Weather plays its own role, too. A windy night might look dramatic on video, but that same gust can send sparks into dry grass and ignite a brush fire in seconds. If the air is still dry or gusty, consider postponing or keeping your display very small.

Above all, embrace a culture of safety. Before your festivities begin, gather everyone together—kids, teens, parents—to walk through basic ground rules. Designate a single person to coordinate the lighting sequence and keep spectators informed. Make sure everyone knows where the water is and what to do if a mishap occurs. A quick huddle can prevent confusion and ensure that, should something go awry, you respond calmly and efficiently.

At the end of the night, celebration continues with cleanup. Don't leave smoldering fragments behind—those little bits can reignite in dry weeds hours later. Walk the launch area with a flashlight, soak any leftovers, and dispose responsibly.

Fireworks tap into a sense of wonder— those bright blooms against a dark sky are a

mesmerizing reminder of human creativity. But that magic only holds when we treat these devices with the respect they deserve. By knowing the real stories behind emergency-room visits, embracing simple precautionary steps, and looking out for each other, we turn a potential hazard into a memorable—and safe— tradition.

Here’s to lightning the fuse on joy, not injury, and ensuring every “ooh” and “ahh” ends with smiles, not sirens. Have a fantastic, safe celebration!

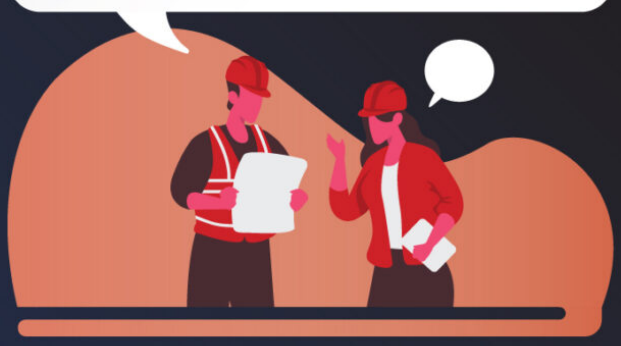
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FIREWORKS & FIRECRACKER SAFETY:
CELEBRATE WITH SPARK, NOT HARM

SafetyNow

The Big Picture

"Nearly 10,000 Americans treated in emergency departments for fireworks injuries in 2023," with 42% being burns. (CPSC)





Common Injuries

- Burns (Hands • Face)
- Lacerations & Punctures
- Eye Injuries
- Hearing Damage

Before You Light... Think Like a Pro.

- **Read Instructions:** Only use legal, intact fireworks.
- **Set Your Zone:** Stable base + 50+ ft away from structures.
- **No 'Duds':** Wait 20 mins before
- **Be Ready:** Have water/buckets/ hoses on hand.

Gear Up for Safety

- ANSI Safety Goggles
- Earplugs
- Leather Gloves
- Long-Sleeve Cotton

Celebrate Responsibly

- Always have a designated "lighter" and "observer."
- Keep children and pets at a safe distance indoors.
- Check wind and ground conditions—avoid dry, windy days.
- Clean up all debris; soak spent fireworks overnight.



For more information or to report a device malfunction, visit cpsc.gov/fireworks or contact your site safety team.