



Naval Safety Center

LESSONS LEARNED



LL 21-16

FIREWORKS MISHAPS II

“So you’re gonna tell me that you don’t have no black cats, no roman candles, or screaming mimis?” — Joe Dirt

It wouldn’t be a proper 101 Critical Days of Summer campaign without talking about fireworks safety. While the naval services have fared well in this category over the last couple of years, our Sailors and Marines continue to lose workdays (*and in some cases, fingers*) in fireworks mishaps. We’d venture to guess that many “incidents” and near-misses don’t make it into our database, but even the reported numbers match the national per-capita statistics.

According to a 2019 Consumer Products Safety Commission study, there were 10,000 fireworks-related injuries treated in emergency rooms (ERs) in that calendar year, plus 12 fatalities. One stat that stood out was the number of children ages four and younger that were injured: 1100 (Wow!), and they had the highest injury rate by age group. Teenagers ages 15 to 19 had the second highest rate. These numbers show us that fireworks safety applies to everyone, including our families. Even if you just do sparklers, here’s a stat for you: Sparklers accounted for 900 of the total fireworks-related emergency room visits in 2019. One last stat: 7,300 of the ER visits occurred during the one-month period between 21 June and 21 July (*go figure*).



No matter your preferred fireworks, whether they’re bottle rockets, lady fingers, “nipsy daisers (with or without the scooter stick),” or the old standard firecrackers, they are all pyrotechnics and should be treated like it. Our unlicensed pyrotechnicians demonstrated for us, albeit unknowingly, what not to do with fireworks. Please read so that we may learn, avoid the emergency room, and keep all our fingers.

- Look What I Can Do! A Sailor was launching fireworks, and one round “exploded on his forehead” causing facial fractures.” That’s all the report says about this unusual way to launch fireworks, but it does mention the member was subsequently counseled on proper and safe procedures. — *We hope we don’t need to add “don’t do this with your forehead” to our lists of things not to do.*
- Follow The Bouncing ... Projectile. A Sailor was in a fellow Sailor’s backyard, where fireworks were being lit. One projectile from a roman candle “bounced off the ground and hit the service member in the right eye.” He was taken to the nearest hospital where he received treatment and was released that night. — *We covered this roman-candle topic in our 2020 edition of fireworks lessons learned: roman candles aren’t made to be handheld anymore. If the projectiles are bouncing off the ground, you’re definitely doing something wrong ... like holding them in your hand. Please don’t do that.*
- Just trying to help. In the morning, a Marine was cleaning up the area where a group had been setting off fireworks the night before. One of the fireworks he picked up was unexploded, and it went off, injuring his hand. According to the report, the firework hadn’t detonated and was set off by static electricity when he touched it. Our well-intentioned Marine had his fifth finger (pinky) amputated to the last knuckle because of this unfortunate explosion. — *Expend fireworks and duds should be placed in a bucket of water before disposal, and don’t wait until the next day lest you suffer this Marine’s fate. Using a tool to pick ‘em up is a good idea too.*
- There’s no substitute. While firing a mortar-style firework out of a PVC pipe (*instead of the provided tube*), the firework malfunctioned (*it’s not a matter of “if,” but “when”*) causing the PVC pipe to rupture, sending fragments into the Sailor’s leg. He was taken to the local hospital for multiple puncture wounds from his right hip down to his ankle. The Sailor later required surgery to remove the PVC shrapnel. — *Stick to the original components, folks; they’re designed for the task.*



• 🎵“This Is How We [don’t] Do It.” 🎵 In a classic example of how not to light a firework, Sailor 1 was holding an explosive firework in his hand while Sailor 2 lit the fuse. The firework detonated immediately after lighting the wick, sending shrapnel flying. Sailor 2 received metal shrapnel (yes, *metal*. *The report didn’t explain why there was metal involved*) in both of his eyes and second degree burns on his neck, torso, and right hand. The report indicated that the firework was defective and detonated with no delay or warning immediately after lighting the fuse. — *This example is reason #1 why you should never light fireworks in your hand. Please let Sailor 2’s burns and 14 days on light duty be all the inspiration you need to handle fireworks properly. BTW, this type of firework was illegal in these Sailors’ state. Check your local laws and regulations **before** you spend a small fortune on fireworks.*

• All is Well! While a Sailor was watching family fireworks, a fountain firework tipped over. According to the report the Sailor “ran while pushing fellow onlookers out of the way.” During the mass evacuation, he fell, fracturing his left hand and suffering second degree burns to his right hand (*which alludes to the possibility that he was the fire fountain lighter*). Instigator or not, surgery, 14 days convalescent leave, and weeks of physical therapy were a high price to pay for confirming his fight or flight response. — *This incident is a good example of why you should keep a fire extinguisher or bucket of water handy. And if (when) an emergency occurs with fireworks, please keep your wits about you. Otherwise, you become the emergency.*

• Bottle Rocket ... Literally. During an Independence Day BBQ, a Sailor was grilling most of the day. After applying aerosol sunscreen spray on his children, he placed the bottle next to his outdoor propane grill lid (*see where this is going?*). The Sailor continued to grill for several hours, and when he went to shut it down for the fireworks, his show started early. The sunscreen container over-pressurized from the heat and exploded, sending the bottle into the Sailor’s abdomen, inflicting burns and contusions over his entire lower abdomen. — *While this mishap isn’t officially a firework, no one should endure the painful “bottle rocket” to the body like our unfortunate Sailor. Please keep aerosols away from the grill.*

• An Emotional Event. Our last story has practically nothing to do with fireworks, but there’s a lesson, so we ask that you indulge us for a minute. An Ensign was attending an Independence Day fireworks show, when apparently, he became overwhelmed with pride in his country and passed out (*actually he locked his knees*). His unwanted meeting with the ground resulted in losing two teeth. The report states the Ensign was dehydrated and fatigued at the time, adding to his risk of becoming unconscious. — *Fireworks aren’t the only hazards you may encounter this summer, and there’s a reason they teach you in boot camp and the academy not to lock your knees. As you enjoy this year’s Independence Day celebrations, stay hydrated, don’t lock your knees, and go ahead and cry during the 1812 Overture ... it’s the patriotic thing to do.*

Lessons Learned / Key Takeaways

In addition to the takeaways from last year’s LL 20-14 Fireworks Mishaps, 1. **Respect the Pyrotechnics**, 2. **Know the law**; here are three new additions from this year’s Fireworks faux pas:

1. **Step away from the Pyro.** Your hands will lose the fight against fireworks every time. If the fireworks fly, spray spark fountains, or go bang, use a long lighting instrument and keep a safe standoff distance. And keep your arsenal of not-yet-lit fireworks far away from your launch area. You don’t want to unintentionally have a grand finale at 2030 and spend the rest of the night at the emergency room.

2. **It’s not improv night.** Improvising fireworks by using the wrong launch methods (e.g. your forehead or PVC pipes), will usually end badly and likely will get you featured in one of our lessons learned. Use the equipment provided, and don’t try to get creative with your launching style. You don’t get extra points for burning yourself.

3. **Check out more safe fireworks tips from the National Safety Council here:**

<https://www.nsc.org/home-safety/tools-resources/seasonal-safety/summer/fireworks>

And remember ... let’s be careful out there.