

## Another vaping danger: E-cigarette explodes in teen's face

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(HealthDay)—A vape pen exploded in the face of 17-year-old Nevada

boy, breaking his jaw and requiring multiple surgeries to repair the damage, according to a case report in the latest *New England Journal of Medicine*.

The 2018 incident highlights a little-known danger of e-cigarettes—the devices can unexpectedly blow up, causing burns and severe facial damage.

"He was [using] this vape pen, and it blew up in his face while he was [using] it," said one of the doctors who treated him, Dr. Katie Russell, a pediatric surgeon at the University of Utah in Salt Lake City.

The e-cigarette blast was strong enough to break bones and blow out teeth.

"He broke his lower jaw, which takes a large amount of force," Russell said. Doctors had to insert a two-inch plate on his lower jaw to stabilize the fracture.

"His jaw was wired shut for about six weeks," she said. "He could only eat soft food for six weeks, until it healed, and then he had to come back and have another operation to get those wires removed."

Although the boy has fully recovered from his injuries, he still has three or four teeth missing, because he's lacked the insurance coverage to afford to have them replaced, Russell said.

"He's still missing all those teeth, but he's hoping to get them fixed this summer," she added.

Between 2009 and 2016, there were 195 documented incidents of explosion and fire involving electronic cigarettes, according to the U.S. Fire Administration (USFA).

The incidents resulted in 133 injuries—38 severe enough to warrant hospitalization, the USFA says.

In October 2016, doctors at the University of Washington Medical Center in Seattle reported treating 15 patients with injuries from e-cigarette explosions over a nine-month span, according to a letter they published in the *New England Journal of Medicine*.

Injuries included flame burns, chemical burns and blast injuries to the face, hands, thighs or groin, the Seattle doctors said.

Dr. Hamad Husainy, a staff physician with Helen Keller Hospital in Florence, Ala., said, "It's not so rare that we're considering this a freak event that happens. This is a potential problem, and as these things become more and more popular, it's probably going to become more prevalent."

Husainy said his hospital saw two such cases in one week a couple of years ago, with e-cigarette explosions causing burns and breaking facial bones.

No one is exactly sure what causes e-cigarette explosions, according to the U.S. Food and Drug Administration.

"I can't tell you why it exploded," Russell said of the teen she treated. "He said he was just [using] it like regular and it just exploded."

Some evidence suggests that the [lithium-ion batteries](#) that power the devices might be at fault, the FDA noted.

To help prevent e-cigarette explosions, the FDA recommends that users:

- Buy vape devices with [safety features](#) such as vent holes and protection against overcharging.
- Replace e-cig batteries if they get damaged or wet.
- Keep loose batteries in a case to prevent contact with coins, keys or other metal objects in your pocket.
- Always charge a vape device with the charger that came with it, never on one meant for phones or tablets.
- Don't charge a vape device overnight, or leave it charging unattended.

According to Gregory Conley, president of the American Vaping Association, "The vast majority of vaping devices on the market carry the same fire risk as other products that use lithium-ion batteries, such as cellphones and laptops."

Conley said, "Adults looking to use these products to quit smoking should not be discouraged by rare events like this, especially since most or all of the incidents linked to the injuries present here involve advanced 'mechanical mod' devices that likely represent less than 1 percent of American vaping product sales today."

Mechanical mod devices contain no safety features such as an automatic shutoff, Conley said. If a battery in a mechanical mod overdischarges and the [device](#) lacks enough air holes to allow it to vent, there is a risk of [explosion](#), he explained.

**More information:** The U.S. Food and Drug Administration has more about [e-cigarette safety](#).

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