



Weekly Safety Tip

E-Bike and E-Scooter Safety



E-Bike and E-Scooter Safety



Electric bicycles and electric scooters, or e-bikes and e-scooters, are more popular than ever. These devices give riders a lower-cost and environmentally friendly way of getting around. But, unknown to many users, batteries that power e-bikes and e-scooters have been known to catch on fire and cause explosions.

Frequently Asked Questions

What are e-bikes?

E-bikes and e-scooters are technically known as “motorized micromobility devices.” They are powered by electricity that is usually provided by a lithium-ion battery. E-bikes can have a motor that either fully propels the vehicle or assists the rider with pedaling.

Do e-bikes catch on fire?

Most e-bikes and e-scooters are powered by lithium-ion batteries. This is the same type of battery that powers many of today’s electric vehicles, cell phones, laptops, and power tools.

When lithium-ion batteries are damaged, they can overheat, catch on fire, and even lead to explosions. When fires occur, they also tend to burn very hot and can be difficult for firefighters to extinguish.

E-bike and e-scooter battery fires have also been associated with faulty charging equipment, improper charging practices, and overloaded electrical circuits..

How often do fires occur?

While there are no national or international statistics on how often e-bikes or e-scooters catch on fire, it does happen with some regularity—and the numbers are rising. The New York City Fire Department (FDNY) has reported more than 130 such fires so far in 2022. These fires have led to five deaths and dozens of injuries. In 2019, the first year FDNY started tracking e-bike fires, only 13 were reported.

Some Safety Tips on how can you stay safe?

Here are a few ways to reduce the risk of fires involving e-bikes and e-scooters.

First, if you are looking to buy one of these devices, only purchase ones that are listed by a nationally recognized testing lab and labeled accordingly.

If you already own or use a device, don’t continue to charge the battery once it’s full, never use charging equipment that didn’t come with your device, and stop using your device if the battery shows signs of damage, such as an unusual odor or change in color.

If your device needs repairs, have them performed by a qualified professional.

Learn more in NFPA’s “**E-Bike and E-Scooter Safety**” **Tip Sheet**, which is attached.

E-Bike and E-Scooter Safety



The popularity of electric bikes and electric scooters (e-bikes and e-scooters) has taken off over the past few years. Lithium-ion batteries are usually the source of power for both, and if not used correctly, or if damaged, those batteries can catch on fire or explode. Whether you use e-bikes or e-scooters as your main way of getting around, or just for fun, there are important safety tips to keep in mind when charging or storing these devices.

The Problem

- Damaged or defective batteries can over-heat, catch fire, or explode.
- Lithium-ion battery fires give off toxic gases and they burn extremely hot.

Safety Tips

- Only purchase and use devices, batteries, and charging equipment that are listed by a nationally recognized testing lab and labeled accordingly.
- Always follow the instructions from the manufacturer.
- Only use the battery and the charger that were designed for, and came with, the device.
- Do not keep charging the device or device battery after it is fully charged.
- Only charge one device or device battery at a time to prevent overloading the circuit.
- Keep batteries at room temperature when possible. Do not charge them at temperatures below 32°F (0°C) or above 105°F (40°C).
- Do not store batteries in direct sunlight or inside hot vehicles, and keep them away from children and liquids.

- Store e-bikes, e-scooters, and batteries away from exit doors and anything that can get hot or catch fire.
- Only have device repairs performed by a qualified professional.
- Do not put lithium-ion batteries in the trash. Recycling is always the best option. Take the batteries to a battery recycling location or contact your local waste department for disposal instructions.

Signs of a Problem

Stop using the e-bike or e-scooter if you notice any of these problems with the battery: unusual odor, change in color, too much heat, change in shape, leaking, smoking, or not keeping a charge.



If you see a fire ...

- ❗ Leave the building immediately.
- ❗ Don't try to fight the fire.
- ❗ Call 911.

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Weekly Safety Share

Roadway Departure

Crashes Resulting in Serious Injuries &



SAFETY SHARE



Roadway Departure Crashes Resulting in Serious Injuries & Fatalities



Each year, roadway departure crashes in the United States result in serious injuries and fatalities. More than 1 in 3 fatalities are associated with impacting fixed objects such as trees and utility poles. Crash data show that more than 18,000 traffic fatalities per year result from roadway departures, and over 7,000 of those roadway departure crashes involved collisions with roadside fixed objects.

Crash History Data:

- 18,000 roadway departure fatalities per year
- 7,000 roadside fixed-object fatalities per year
- 3,500 fatalities per year involving roadside trees
- 820 fatalities per year involving roadside utility poles and light supports

Crash Likelihood Factors:

- lane width
- horizontal curvature
- advance visibility of curve
- percent grade
- presence of shoulder rumble strips
- presence of delineation
- road surface condition
- pavement skid resistance

Crash Severity Factors:

- type of roadside object
- distance from traveled way to roadside object
- paved shoulder width

... Continued on next page on related fatality concern with higher freeway / interstate speed limits ...



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