

## Lithium-ion batteries and house fires

### What is a lithium-ion battery?

A lithium-ion battery is a light weight, compact and high energy battery that is used in many modern devices such as power tools, phones, laptops, powerbanks, vapes, rechargeable hearing aids, e-bikes, e-scooters and cars.

### Are they safe?

Lithium-ion batteries are generally safe provided that they are used, charged and stored correctly and in accordance with the manufacturer's recommendations. The batteries can be a fire hazard if they are damaged, incorrectly charged, mishandled or not disposed of correctly.

When the batteries overheat or are damaged, they emit toxic, flammable and explosive gas. The intense fires are difficult to extinguish and because of their explosiveness, they can quickly spread to nearby items including buildings and have the potential to injure people in the vicinity.

While generally safe, with the rise in popularity of devices using Lithium-ion batteries we expect an increase in battery-related fires. For example, house fires caused by Lithium-ion batteries are on the rise and it is estimated they now cause about 10% of total loss house fires in New Zealand.

### Causes

The main reasons lithium-ion batteries catch fire are:

- Overcharging
- Using incorrect chargers
- Overheating or exposure to extreme temperatures (hot or cold)
- Physical damage such as dropping or puncturing the device



### Fire prevention tips

1. Avoid leaving devices charging unattended or overnight and fully disconnect them after charging
2. Only use the approved chargers supplied with the device
3. Avoid exposing devices to heat, moisture, or direct sunlight
4. Protect your batteries from strong impacts or sharp objects
5. Never charge your devices in bed, or on flammable material or surfaces
6. Discard damaged devices showing signs of swelling, leakage or overheating
7. When a battery is new, monitor the first few cycles of charging closely
8. Charge and store batteries away from exits and living spaces
9. Install approved smoke or heat alarms in charging areas to help give an early warning of extreme battery overheating or fire.
10. Do not put lithium-ion batteries in the rubbish. Use your local council's recycling



### Are lithium-ion battery house fires covered by your insurance?

House fires caused by lithium battery failure are generally covered by your house insurance policy provided the homeowner was not acting recklessly and the damage was accidental and unforeseen.

See Fire and Emergency New Zealand for more information:

<https://www.fireandemergency.nz/lithium-ion-battery-safety/>

#### Disclaimer

The information herein is provided as a general guide only. It is not a substitute for seeking your own professional advice.