

How to get the most out of your Lithium-Ion batteries

Lithium-Ion batteries power most of the devices we use regularly. This includes Mobile Phones, Tablets, Laptops, iPods and many other types of devices. These tips will help you keep your Lithium battery running for years

1. **Keep your lithium batteries cool** – Li-ion batteries perform best at about normal room temperature. Both high and low temperatures reduce the batteries ability to provide power. **High** temperatures are a major issue with Li-ion batteries and can actually physically damage the battery. So if your device or battery becomes noticeably warm while you're using it, consider moving to a cooler location. If that's not possible, try reducing the amount of power the device is using by turning off unneeded apps, features, or functions; by reducing screen brightness; or by activating the device's power-saving mode. If all else fails, simply turn off the device. **Low** temps usually won't cause any long-term damage, although a cold battery won't produce as much power as it otherwise would. The power drop becomes very noticeable at temperatures lower than about 40F. Most consumer-grade Li-ion batteries are essentially useless at temperatures around or below freezing.
2. **Charging Tips** – Buy and use good quality chargers whenever possible and don't leave them plugged in to a charger for extended periods when not in use. It is OK to leave it plugged in and charging at 100% while you are using it, but don't leave it on there. This can put strain on the battery if left plugged in all the time
3. **Charging/Discharging** – Slow and steady charging and discharging put the least amount of stress on the battery. If you have used your device hard and drained the battery a lot, let it cool down a bit before using it again or charging it. Don't use a fast charger if it wasn't designed specifically for your device. If you don't have a charger available, the USB ports on a computer provide a safe low voltage method to charge your device.
4. **Long Term Storage** – If you are going to store a device for a long time, it is best to store it at around 50% charge, this puts the least amount of strain on the battery chemistry.
5. **Avoid physical stress** – Drops and falls can damage batteries causing them to leak or swell. The chemicals inside these batteries are quite corrosive. If your battery is swollen or leaking, DO NOT USE the device until it can get serviced/repaired.
6. **Charging Cycles** - Batteries are rated by number of "full charge cycles", this means how many full charges the battery can handle before it starts to lose some total capacity. A full charge can consist of a 0% to 100% charge or five 20% charges or three 33% charges, the effect is the same. A higher number of small discharge/charge cycles doesn't have any detrimental effect on the number of charge cycles.