Rechargeable vs. disposable

It's an age-old question, but it really depends on how you're using them. For low-draw items, like a clock or smoke detector, consider buying disposable batteries; **they have a longer lifespan because they drain power slowly**. In applications where the device is very low power, such as a TV remote, it may make sense to use non-rechargeable batteries because the battery could last six to 12 months or so. Just make sure you replace those smoke detector batteries at least every six months. For things that you use every day—especially for photographers who use a digital camera or emergency medical technician's equipment—rechargeable batteries make more sense. Their lifespan is shorter, but you get more power for your dollar. It would be more expensive to use non-rechargeable batteries if you have to purchase, remove, install, and dispose of the battery in something like your cell phone or your car every day.

Trust name brands

When looking for reliable and steady batteries for your household or work, look for name brands that have a reputation of high quality like Duracell and Energizer.

Know a battery's lifespan

If you ever consider buying a used lithium-ion battery to use in your laptop or smartphone, just know that the moment it leaves the factory, a lithium-ion battery **starts to fade**. The **life cycle for a lithium-ion battery** varies, but it's only really limited to a few hundred charges—between 300 and 500 on average. Environmental factors also play into a battery's shelf life, so keeping your laptop or smartphone at room temperature is very important to keeping it going.

You don't need to drain before recharging

That used to be the wisdom, but it's outdated now: **Letting your battery drain will actually cut down on its life cycle**. In the early days of cell phones, batteries were made from nickel-metal hydride (NiHM) and nickel-cadmium (NiCd); you could get more out of the battery by letting it go down to zero. However, **smartphone and laptop batteries are made from lithium-ion**, which has a higher capacity to keep a charge. They are also "smart" enough to know when their batteries are fully charged and simply turn off when they have enough juice.

Keep batteries out of the fridge

You may have heard that **storing batteries in the refrigerator will prolong lifespan**. Not true—in fact, you might be causing more harm than good in the long run. Strong batteries in a refrigerator could create condensation that could lead to corroded contacts or damaged seals, which could weaken performance. You're best off storing your batteries at room temperature (about 68°F to 78°F) and in dry locations like a drawer or cabinet.

"Optimal storage environment will depend on the battery chemistry. Excessive heat is typically the culprit in premature failure for lead-acid (car battery) and lithium-ion (cell phone batteries)," said Guadiz to *Reader's Digest.* "Too cold can cause freezing of the electrolytes contained in some batteries and cause damage. Modern non-rechargeable batteries have an extremely low self-discharge rate so it does not seem to be worth the space it takes up in your refrigerator."

Don’t worry about overcharging

Modern smartphones and laptops are built to know when a battery is fully charged. The device stops sending “juice” to the battery when its topped off, automatically stopping charging. But did you know you should **avoid charging your phone in your car**?

Say “no” to off-brand wall chargers

Remember the **flight attendant** who got electrocuted while charging her iPhone in 2013? Her knock-off charging cord may have been to blame. There are a few trusted tech companies that make off-brand wall chargers and other smartphone accessories for Apple products and Android devices, such as Belkin, KMS, and AmazonBasics. These companies work with smartphone manufacturers to make accessories that are completely compatible with the product. The bargain-basement knockoffs are made on the fly by companies that don’t always use proper wiring or wattage—and accidents could happen.

Don’t mix brands

Did you know **mixing different brands of batteries** could affect their performance? Batteries are made with unique chemistry and voltages, and the weaker of the two will drag the stronger one down, ultimately degrading your gadget’s performance.
This same is true when you mix old and new batteries together. Make sure all batteries in a device are from the same manufacturer and from the same package to ensure strength. Variation in performance between manufacturers may lead voltage imbalance over time and ultimately a **battery failure and potential hazard**.