

When the battery-life indicator on your laptop drops into the single digits, the scramble to find a place to plug in can nerve-wracking.

You can find lots of tips online for extending laptop battery life, but according to engineers many of them are myths. As a prime example, some posts in online forums say you should never charge a laptop battery to more than 80 percent or let it drop below 20 percent. Other people insist that you should always charge a new laptop to 100 percent before using it.

Not so, the experts say.

“As with any technology, when it was originally emerging there probably were some things which might have been useful” but no longer are, says Mike Nash, chief technologist for personal systems at Hewlett-Packard. Today, esoteric-sounding

advice tends to be outdated or just wrong. (“Personally, what I like to do is make a combination of garlic, olive oil, and baking soda, and put it on top of the device,” he jokes.)

The following tips for extending laptop battery life are quick, simple, and easy to follow. We also have some advice on how to shop for a laptop that will run all day.

### Dim the Display

Your first order of business to save laptop battery life: Turn down the brightness of your display.

“Display panel brightness is absolutely the most battery-consuming technology we have,” says Gary Lusk, systems senior principal engineer at Dell. This is easy to do, and you don’t even need to go into settings.

Depending on your specific laptop model, you'll probably find this functionality on one of the function row keys (F1, F2, etc.).

“When you first turn your computer screen brightness down to, say, 50 percent, for a moment you might say, ‘Oh, this isn’t bright enough,’ but about 10 seconds later your eyes adjust and it’s totally fine,” HP’s Nash says. “Especially if you’re just doing email or something on a plane and it’s dark, having your screen cranked down to 50 percent will have a dramatic impact on how long your battery lasts.”

## Turn Off Unused Features

Once you’ve lowered the display, turn off any capabilities you aren’t using at the moment.

You can start with WiFi and Bluetooth: Why have your laptop’s radios continually search for signals while you’re fully

engrossed in editing a Word document on a flight or at the library? In Windows 10 there's a dedicated Airplane Mode (located on the bottom taskbar) to turn off both of these, and Mac users can turn them off individually using the controls at the top of the screen or by going into settings.

Some higher-end laptops, including those aimed at gamers, designers, and videographers, feature advanced graphics capabilities in the form of a dedicated graphics processing unit (GPU)—and these processors can burn through battery life.

But you don't always need that much graphics horsepower. Laptops such as the 15-inch MacBook Pro with Touch Bar and Samsung Notebook 9 let you disable the dedicated GPU temporarily. Do that while you're working on text documents or just browsing the web—the laptop will use the less power-hungry

integrated graphics processor and make your battery run longer.

## Shut Down Apps

In the days before 4GB or 8GB memory was standard, running more than a few apps at the same time could result in annoyingly choppy performance. That had a hidden benefit: It reminded you to close applications you weren't using.

Today's gobs of memory make it easy to have the likes of Firefox, Outlook, Spotify, and Photoshop open at the same time without making the laptop seem any slower, quietly doing a hit job on battery life.

The fix? "Kill all of your programs," says Vicky Doan-Nguyen, assistant professor of materials science engineering at Ohio State University. The worst offenders may be the apps that constantly communicate with remote servers, such as an email

client that's always fetching new messages.

Of course, it's perfectly okay to have more than one app open at a time—it's just smart to shut down anything that you're not actually using. Is YouTube running in the background while you make last-minute tweaks to a PowerPoint deck? That's not going to help your laptop battery life, or your productivity.

### Buy a Laptop Battery-Life Champ

Steps such as dimming your display can make your laptop work longer between charges, but it can't turn a computer with an 8-hour battery life into a marathon machine.

If battery life is important to you, there are a few ways to make sure your next laptop delivers.

It's also a good idea to buy a laptop with a solid-state drive rather than a conventional hard-disk drive. SSDs use less power because they don't have moving parts. (They're also **faster than hard-disk drives.**)

Additionally, you might want to steer clear of **laptops with 4K displays.** They're nice to look at, but they drain your battery far faster than a conventional 1080p HD display.

Finally, you can consider one of the new **Always-Connected PCs,** from several manufacturers, that are supposed to start shipping later in March. These laptops get their name from their built-in cellular internet connectivity, but their biggest selling point could be their claimed battery life of 22 hours or more.