

Replacement laptop batteries cost anything from about £40 to £150. That's a lot of money, so it makes sense to treat your battery so as to give it the best chance of outlasting the machine. It is very common for the battery to fail after two to three years, but you probably want the machines to last from three to six years.

The best treatment of the battery varies depending upon the type. Somewhere on the battery itself (and you may need to remove it from the machine to find the relevant label), you should find a description as being "Li-ion" (or "lithium ion") or "NiMH" (or "nickel-metal hydride".)

NiMH batteries – completely drain the battery every now and again. Do this by using the machine while it is not connected to the power supply until the machine tells you the battery is flat and needs to be re-charged. Do this every month or two. There may be more specific instructions about how often to do this either on the battery itself or on documentation that came with it. If you always use the laptop connected to the mains then the battery will last longer if you completely remove it. If you do this, then put it back in and drain/re-charge it every few months. Incidentally, it can make a laptop much more comfortable to use on your lap if the battery isn't connected as the battery weight is a considerable part of the total weight.

Li-ion batteries – here the advice is NOT to drain the battery completely. On the contrary, keep some charge in it at all times. Again, I would recommend removing it entirely if you are usually connected to mains power, but check it occasionally to make sure it's got some charge in it and top it up every now and again (see below for checking the charge). The advice with Li-ion batteries is to store them partially charged.

How do you know if the battery is “wearing out”?

It probably won't charge to 100% and the amount of time you get on each charge reduces. You may eventually get a message popping up telling you to replace the battery.

Remove a nearly dead battery?

It seems sensible to leave a dying battery in the laptop while running the machine off the mains. The theory, of course, is that if the power supply is interrupted then you still have an opportunity to close everything down nicely without problems. Normally I agree, but if you start to get strange things happening to your computer – such as a noticeable time lag between hitting a key and seeing it onscreen – then try removing the failing battery. It seems as if the laptop diverts power to charge a failing battery at the expense of other parts of the system. I may be wrong on why this happens, but it is certainly the case that “keyboard lag” can sometimes be cured by removing a failing battery.

How can I tell how charged the battery is?

Both Macs and PCs have options for displaying an on-screen icon that shows how much

charge is in the battery. When the battery is not connected, you can usually get an idea of its state of charge by a series of LED lights on the underside of the battery that are accompanied by a small button (see illustration - yellow highlight). Pressing the button will illuminate the number of LED lights that correspond to the current state of charge.



How do I remove the battery?

Turn the laptop upside down. Batteries come in all sizes and proportions but you are looking for a rectangle that has one or two catches along one side. Typically, one of these catches is not spring-loaded so you can slide it to the open position (usually indicated by an open padlock symbol) and let go. Then push the other catch against the spring and slide or lift the battery out of the case at the same time. See the red highlights in the illustration for spring-loaded and non-sprung catches on a Samsung Q35 battery. Mac batteries are often held in place with a button with a slot across it. Turn the slot by 90 degrees and the battery can be removed. Some Mac batteries can't be removed except by professional repairers as they are entirely contained within the case rather than attached to the underside of it (eg the MacBook Pro).

Extending Battery Life

Given that it would be nice to extend the battery's life so that it never needs replacing, it may be worth bearing in mind that the more a battery is used, the more of its life is used up, so reducing un-necessary use of the battery may help. Apart from completely removing the battery and running off the mains for most of the time, here are a few suggestions for reducing battery use:

- Ensure that the laptop at least goes into "sleep" mode if left unattended when running from the battery.
- All operating systems have options for balancing computer performance against the length of time each battery charge will last. The longer each charge lasts, the longer the battery itself will last.
- Try to keep the air vents around the casing of the laptop clear of dust, fluff, and nearby obstructions. A good flow of air through the laptop is essential to keep the electronics working within specific temperature limits. If it gets hot then the fan will cut in. The fan needs power and this will come from the battery if the laptop is not connected to the mains. The best way to keep the vents clear of dust is by blowing air into them from an "air duster" (a can of compressed air - available from PC World, Maplins, Rymans etc).

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