Pursuant to Regulation (EU) 2023/1542 of the European Parliament and of the Council of 12 July 2023 concerning batteries and waste batteries, learn more about:

- **Best practices for optimising battery life**
- **Your role in separating electronic and battery waste**
- **How to recycle electronic and battery waste**
- **How to safely handle waste batteries**
- **The meaning of the labels and symbols on batteries or printed on their packaging or in the documents accompanying batteries**
- **The impact of hazardous substances, present in batteries, on the environment and on human health**
- **The costs of managing battery waste**

End-users play a key role in waste prevention by making conscious purchasing decisions, reusing products, maximising product lifespan, and appropriately sorting waste. Your daily actions help reduce the amount of waste generated and support a more sustainable and circular economy.

Best practices for optimising battery life

There are different ways to optimise both the battery life and battery lifespan of your device. "Battery life" refers to the amount of time your device operates before it needs to be recharged. "Battery lifespan" is the amount of time your battery lasts before it needs to be replaced. Maximise both and you'll get the most out of your Apple device.

Tips for iPhone and iPad

Update to the latest software.

Always make sure your device is using the latest version of iOS.
- To see if you need an update, go to Settings > General > Software Update.
- If an update is available, you can connect your device to a power source and update wirelessly.
- To have your device update automatically overnight, go to Settings > General > Software Update and turn on Automatic Updates.

There are two simple ways you can preserve battery life, no matter how you use your device: adjust your screen brightness and use WiFi.

1. Dim the screen or turn on Auto-Brightness to extend battery life.
   - To dim, open Control Centre and drag the Brightness slider to the bottom.
   - Auto-Brightness adjusts your screen to lighting conditions automatically. To activate it, go to Settings > Accessibility. Tap Display & Text Size, then turn on Auto-Brightness.

2. When you use your device to access data, a WiFi connection uses less power than a mobile network — so keep WiFi on at all times. To turn on WiFi, go to Settings > WiFi to access a WiFi network.

Enable Low Power Mode.

Low Power Mode temporarily reduces background activity on iPhones and iPads to extend battery life when the battery level gets low. Your iPhone lets you know when your battery level goes down to 20%, and again at 10%, and prompts you turn on Low Power Mode with one tap. Or you can enable it by going to Settings > Battery. You can also add a Low Power Mode control to Control Centre by tapping the + icon.Low Power Mode reduces the amount of power that the device uses by affecting certain features, such as:

- 5G: turned off on most devices, except for video streaming and large downloads on iPhone 12 and 13 models
- Auto-Lock: defaults to 30 seconds
- Display brightness: reduced
- Display refresh rate: limited up to 60 Hz on iPhone and iPad models with ProMotion display
- Visual effects: some effects are turned off
- iCloud Photos: temporarily paused
- Automatic downloads: turned off
- Email fetch: turned off
- Background app refresh: turned off

When Low Power Mode is active, the battery icon in the status bar turns yellow. Low Power Mode automatically turns off when the device is charged to 80% or higher.

View Battery Usage information.

To see an overview of your battery level and activity for the last 24 hours and up to the last 10 days, go to Settings > Battery.

The bars in the Activity chart show how many minutes you've used your device during that hour or day. Dark blue indicates onscreen usage, and light blue indicates idle or screen-off usage.

Tap a bar to see activity and usage by app during that hour or day.

To see how long each app was in use on screen or in the background, tap Show Activity. Battery usage is unique to each app. Graphically intensive apps, like apps that stream video from the internet and games, can use a lot of battery. Under each app, you might see these usage types:

- Background Activity: Most of the app's battery usage, such as playing music or tracking location, happened while the app was active in the background. You can improve battery life by reducing your use of the app.
- No Mobile Coverage and Low Signal: Your iPhone was searching for a Wi-Fi or mobile signal or was being used in a low signal environment, and this affected your device's battery life. To improve battery life, if you can, use your iPhone in a place with a strong signal. If you know you'll be in an area with no coverage for some time, enable Flight Mode.
- Connected to Charger: The app was used only while your iPhone was charging, so the battery wasn't used. You can also see when your device was last connected to a charger and the last charge level. With iOS 16 and later, you can see if charging is paused because of Optimised Battery Charging, Clean Energy Charging, or temperature.

While viewing your battery usage, you might get a suggestion like Enable Auto-Brightness or Adjust Display Brightness. This is because the software determined that changing these settings could improve your battery life. You might also see an Insight, like Ongoing iOS Setup or Ongoing Device Setup. Insights inform you of activities happening in the background that can affect battery life and thermal performance for a while.

Tips for Apple Watch

Update to the latest software.

Always make sure your Apple Watch is using the latest version of watchOS.

- To see if you need an update, open the Apple Watch app on your iPhone and go to My Watch > General > Software Update.

- If an update is available, connect your iPhone to Wi-Fi, attach the charger to your Apple Watch (make sure it has at least 50% charge), and update wirelessly.

Enable Low Power Mode.

You can maximise battery life by turning on Low Power Mode or preventing apps from refreshing in the background. Low Power Mode turns off certain features, such as Always On Display, background heart rate and blood oxygen measurements, and heart rate notifications. Other notifications may be delayed, emergency alerts may not arrive, and certain mobile and Wi-Fi connections are limited. Mobile is turned off until you require it—when you stream music or send a message, for example.

When the battery level drops to 10 percent or lower, your Apple Watch alerts you and asks if you want to turn on Low Power Mode. To turn it on manually, do the following:

- Press the side button to open Control Centre.
- Tap the battery percentage, then turn on Low Power Mode.
- To confirm your choice, scroll down, then tap Turn On.

- You can tap Turn On For, then choose On for 1 Day, On for 2 Days, or On for 3 Days.

View Battery Usage information

To view your battery usage and charging history, open the Settings app on your Apple Watch and go to Battery.

Tips for MacBooks

Update to the latest software.

Always make sure your MacBook is using the latest compatible version of macOS. If you're connected to the Internet, macOS automatically checks for software updates every week, but you still control when the updates are installed. To confirm that you're using the latest software, go to the Apple menu and choose Software Update.

Learn more about updating macOS >

Optimise your settings.

Energy. The Energy Saver preference pane includes several settings that determine power levels for your MacBook. Your MacBook knows when it's plugged in and runs accordingly. When using battery power, it dims the screen and uses other components sparingly. If you change this setting to maximise performance, your battery will drain more quickly.

Brightness. Dim the screen to the lowest comfortable level to achieve maximum battery life. For instance, when watching a video on a flight, you may not need full brightness if the cabin lights are off.

Wi-Fi. Wi-Fi consumes power, even if you are not using it to connect to a network. You can turn it off in the Wi-Fi status menu in the menu bar or in Network preferences.

Applications and peripherals. Disconnect peripherals and quit applications not in use. Eject an SD card if you're not currently accessing it.

Plug in and power on your MacBook to charge other devices.

Make sure your MacBook is plugged in and powered on when you're using it to charge other devices via USB. Otherwise those devices may drain the battery in your MacBook faster than normal. If another device is connected to your MacBook when it's turned off or in sleep or standby mode, the device's battery may drain.

General Performance Tips

Use built-in software to optimise charging.

To reduce battery ageing, built-in software and hardware systems are included to manage charging patterns and battery temperature.

- Optimised Battery Charging and Optimised Charge Limit adapt to your daily usage and preserve your battery lifespan over time. Optimised Battery Charging is available on all platforms as of iOS 13, watchOS 7, and macOS Big Sur. Based on your daily charging routine, it may automatically defer charging to 100% until shortly before you need to use the battery. Charging may pause temporarily while in extreme temperature conditions, and will resume once the battery's temperature returns to its normal operating range. You may see a notification appear on the lock screen when charging has paused for this reason. Paused charging information is also available in Settings > Battery.

Remove certain cases during charging.

Charging your device when it's inside certain styles of cases may generate excess heat, which can affect battery capacity. If you notice that your device gets hot when you charge it, take it out of its case first.

Store it half-charged when you store it long-term.

If you want to store your device long term, two key factors will affect the overall health of your battery: the environmental temperature and the percentage of charge on the battery when it's powered down for storage. Therefore, we recommend the following:

- Do not fully charge or fully discharge your device's battery — charge it to around 50%. If you store a device when its battery is fully discharged, the battery could fall into a deep discharge state, which renders it incapable of holding a charge. Conversely, if you store it fully charged for an extended period of time, the battery may lose some capacity, leading to shorter battery life.
- Power down the device to avoid additional battery use.
- Place your device in a cool, moisture-free environment that's less than 90° F (32° C).
- If you plan to store your device for longer than six months, charge it to 50% every six months.

Depending on how long you store your device, it may be in a low-battery state when you remove it from long-term storage. After it's removed from storage, it may require up to 20 minutes of charging with the original adapter before you can use it.

Your role in separating electronic and battery waste

Electronic and battery waste must be collected and recycled separately from household waste.

Electronic and battery waste may contain hazardous substances that must be disposed of carefully to prevent harm to natural habitats, wildlife, and human health. Many of the electronics and batteries we throw away can be recycled, which helps preserve natural resources and reduces the environmental and health risks associated with disposing e-waste in landfills. This is part of the objectives of the EU Waste Electrical and Electronic Equipment Directive and the EU Battery and Battery Waste Regulation.

How to recycle electronic and battery waste

You can recycle any Apple device or comparable devices from other manufacturers, as well as batteries, lightbulbs, and small electronics, with us or with your local authorities, without having to purchase a new product.*

Recycling solutions vary from country to country. We recommend you check the solutions available to you on the Apple Reuse and Recycling Programme page. Independent recyclers can request instructions for removing batteries and other components that require special handling by referencing our Apple Recycler Guides.

How to safely handle waste batteries

Handling batteries safely, in particular lithium ion batteries, is crucial to prevent accidents and ensure their longevity. Here are some essential tips on how to do it:

For products with batteries that are not designed to be replaceable by end users, repairs should be performed by trained technicians. Unauthorised handling can lead to damage, overheating, fire, or injury.

Proper disposal: Batteries may contain substances that can be harmful to the environment, and human health. Batteries should be recycled or disposed of separately from household waste and according to local environmental laws and guidelines. For more information about battery service and recycling, visit the Battery Service and Recycling website.

Protect from physical damage: Avoid puncturing, crushing, or exposing batteries to excessive heat or direct sunlight, as these actions can cause the battery to malfunction or become hazardous.

Use appropriate accessories: To ensure safe charging and optimal battery performance, use Apple USB power adapters or third-party power adapters that are compliant with applicable country regulations and international and regional safety standards.

For more information on how to safely handle batteries, please visit our: Self Service Repair page >

The meaning of the labels and symbols on batteries or printed on their packaging or in the documents accompanying batteries

To remind you that electronic devices and batteries can be recycled, they are marked with a crossed-out wheelie bin symbol. Please do not throw any Apple devices, electronics or batteries in your household waste.

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CE

The CE marking appears on many products traded on the extended Single Market in the European Economic Area. CE marking indicates that a product has been assessed by the manufacturer and deemed to meet EU safety, health and environmental protection requirements.

The impact of hazardous substances, present in batteries, on the environment and human health

Electronic and battery waste may contain hazardous substances that must be disposed of carefully to prevent harm to natural habitats, wildlife, and human health. Many of the electronics and batteries we throw away can be recycled, which helps preserve natural resources and reduces the environmental and health risks associated with disposing of e-waste in landfills.

The costs of managing battery waste

Country	Battery type	Chemistry	Fee
Belgique/België	Batterie portable/ Draagbare batterijen	Pile bouton/Knoopcel	0,053 EUR/unité 0,053 EUR/stuk
		Lithium	De 0,2 à 0,57 EUR/unité selon le poids de la batterie Van 0,2 tot 0,57 EUR/ stuk, afhankelijk van het gewicht van de batterij
		Alcaline/alkalisch	0,053 EUR/unité 0,053 EUR/stuk
Cesko	Přenosné baterie	Zásadité	0,25 CZK/kus
		Lithium-iontová	Od 0,16 do 2,33 CZK/ kus v závislosti na hmotnosti baterie
		Knoflíková buňka	0,19 CZK/kus
Danmark	Bærbare batterier		
Deutschland	Gerätebatterien	Alkalisches Mangan	0,0063 EUR/stück
		Lithium	0,0105 EUR/stück
		Knopfzelle	0,0028 EUR/stück
		Lithium-Ionen	Von 0,0077 bis 0,099 EUR/Stück je nach Batteriegewicht
Ireland	Portable battery	Alkaline	1 EUR/kilo
		Lithium	1,4 EUR/kilo
España	Baterías portátiles	Pila de botón	De 0,005 a 0,011 EUR/ unidad según peso de la batería
		Alcalina	De 0,004 a 0,005 EUR/ unidad según peso de la batería
		Lones de litio	De 0,015 a 0,276 EUR/ unidad según peso de la batería

Country	Battery type	Chemistry	Fee
France	Batterie portable	Lithium	0,453 EUR/kilo
		Bouton rechargeable au lithium	2,5 EUR/kilo
Italia	Batterie portatili	Litio	1,20 EUR/chilo
		Pile a bottone alcaline	1,25 EUR/chilo
		Pile a bottone al litio	1,25 EUR/chilo
Luxembourg	Batterie portable	-	0,05 EUR/unité
Magyarország	Hordozható akkumulátornak	-	160 HUF/kiló
Nederland	Draagbare batterijen	Alkalisch	0,026 EUR/stuk
		Lithium-ion	Van 0,036 tot 0,634 EUR/stuk, afhankelijk van het gewicht van de batterij
		Lithium/lithium-ion knoopcellen	0,009 EUR/stuk
Norge	Bærbart batteri	Alkalisk/Mangan	5,37 NOK/kilo
		Litium-ion	6 NOK/kilo
Österreich	Gerätebatterien	Lithium	0,816 EUR/stück
Polska	Baterie przenośne	-	1,77 PLN/kilogram
Portugal	Baterias portáteis	Alcalina	0,55373 EUR/quilo
		Botão	0,7277 EUR/quilo
		íon de lítio	0,22282 EUR/kquilo
Schweiz/Suisse	Gerätebatterien/Batterie portablei	Lithium	Von 0,05 bis 0,2 CHF/ Stück je nach Batteriegewicht De 0,05 à 0,2 CHF/unité selon le poids de la batterie
Sverige	Bärbara batterier	Alkalisk	14 SEK/kilo
		Knappcell	50 SEK/kilo
		Litium-jon	3 SEK/kilo

Country	Battery type	Chemistry	Fee
Suomi	Kannettaviksi akuiksi	Emäksinen	1,3 EUR/kilo
		Painikesolu	0,4 EUR/kilo
		Litium	2,40 EUR/kilo
Türkiye	Taşınabilir pil	-	67 TRY/kilosu
Northern Ireland	Portable battery	-	1.75 GBP/ton

**small electronics are defined as devices with a longest side measuring up to 25 cm.*