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User Guide

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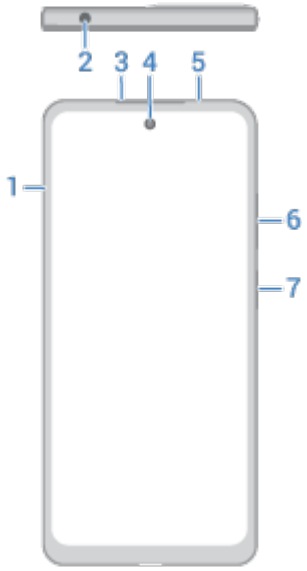
About your hardware

Hardware diagram



1. Tray for SIM and SD cards
2. Headset jack
3. Earpiece/speaker
4. Front camera
5. Proximity sensor
6. Volume up/down button
7. Power button and fingerprint sensor

1. Flash
2. Main camera
3. Microphone
4. USB-C port to charge phone, transfer files, and share data connection with tethered devices.
5. Speaker

Protect your phone

Find cases and other accessories designed for your phone at motorola.com

Care for your phone

To clean the screen:

- While this does not disinfect your phone, the best way to keep your phone clean is to wipe it thoroughly with a dry soft cloth. Avoid abrasive cloths, including paper towels and other materials with rough surfaces.
- If the screen gets drops of liquid on it, wipe it with a clean, dry cloth.

To disinfect your phone:

- It is okay to use wipes or cloths moistened with 70% isopropyl alcohol to gently wipe your screen.
- When disinfecting or cleaning your phone, turn it off and avoid getting any moisture in its openings, including the charging port, headphone jack, microphones and speakers.
- Don't submerge your phone in any cleaning agents, avoid using any cleaners with bleach or abrasives, and avoid spraying cleaners directly on the screen.

Prevent water damage

Your phone is water and splash resistant, but not completely waterproof. Avoid exposing your phone to water or any other liquids, and do not intentionally submerge it in any liquid. Water and splash resistance are not permanent, and the protection performance may continue to decline due to daily use.

Liquid damage is not covered by your warranty.

To prevent water damage to your phone:

- Do not expose your phone to pressurized water, salt water or liquids other than fresh water
- Dry your phone and ports thoroughly with a soft, clean cloth
- Don’t try to charge your phone when it’s wet
- Don't drop, puncture, or scratch your phone, as this could damage the water repellent features

Insert or remove SIM and SD cards

About the SD card

Your phone supports an optional microSD card up to 1 TB.

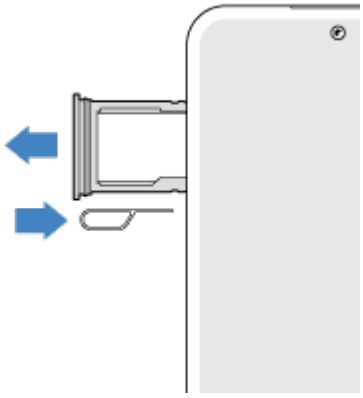
A Class 2, 4, or 6 card is sufficient.

Your phone uses the card as portable storage for media files: photos, videos, and music. Because it's portable, you can easily swap the card and its content between devices. After you insert the card, be sure to update settings within media apps (like camera, music, and podcast apps), so they use the card to store content you create or download.

You can't store apps on the SD card because it is portable storage.

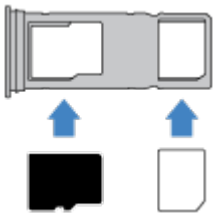
Insert or replace cards

1. If you want to remove the SD card, eject it first.
2. Insert the SIM tool into the tray hole and gently push to pop it out.

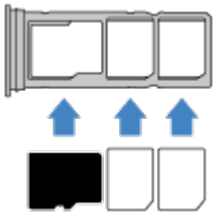


3. Insert or remove the cards as needed.

   To use an SD card and a SIM card:

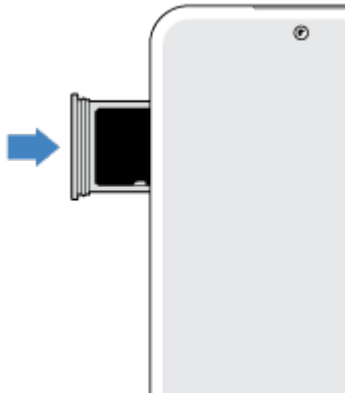


   Or, to use two physical SIM cards (not available on all models):



   To see if your phone supports two physical SIM cards, go to **Settings** > **About phone** > **SIM status**. If you see **SIM Slot 1** and **SIM Slot 2**, then you can use two physical SIMs in your phone.

4. Push the tray back into the phone.



If you inserted two SIMs, you'll receive a notification to set them up. Swipe the notification down and tap it to manage dual SIMs. If you see , troubleshoot the issue.

Note: If you need to activate or resize a SIM, contact your carrier.

Fix an issue

What type of issue do you have?

- SIM card or calls
- SD card

Copy data from old phone

Copy data from iPhone

You'll use Google Drive to copy files from your iPhone and iCloud account to your new phone and Google account:

- Photos will back up to Photos.
- Contacts will back up to Contacts.
- Calendar will back up to Calendar.

1. Charge both phones and connect them to a Wi-Fi network.
2. To ensure you don't miss any messages or calls, on your iPhone:
   a. Turn off iMessage. (**Settings** > **Messages** off. Or, if your SIM has been removed, deregister your phone.)
   b. Turn off FaceTime. (**Settings** > **FaceTime** > off.)
3. Download the Google Drive app on your iPhone.
4. On your iPhone, open Drive and then:
   a. Sign in with your Google account. If you don't have one, you can create it now.
   b. Tap > **Settings** > **Backup & reset** and start the backup.
5. Wait for the backup to complete.
6. When complete, on your new phone, sign in with the same Google account (**Settings** > **Passwords & accounts** > **Add account**).

Copy data from Android phone

During setup, you can copy your apps, music, contacts, messages, and more. Learn what does and doesn't get copied.

If you no longer have your old phone or can't turn it on, you can copy files using a backup from the cloud with your Google account.

Copy data

1. Charge both phones and turn them on.
2. On your new phone:
   a. If this is the first time you've turned it on, select your language on the setup screen.
   b. If you skipped copying files during setup, swipe down from the top of the screen and tap the Android Setup notification to finish setting up your phone.
3. Tap **Start**.
4. Insert your SIM to connect to the mobile network, or tap **Skip**.
5. Connect to a Wi-Fi network and tap **Next**.

6. Follow the onscreen instructions to select the old phone or backup associated with your Google account, and to choose which apps and data to copy.

> **Tip:** Be sure to leave **Back up to Google Drive** turned on.

After migration, merge any duplicate contacts.

What gets copied

Here's what gets copied from the old phone:

- Apps and app data
- Music, photos, and videos
- Google accounts
- Contacts stored on your phone or SIM card
- Text messages
- Multimedia attachments in messages
- Most phone settings
- Wallpaper
- Call history

You'll see these when you sign in to your Google account on your new phone.

What doesn't get copied

These items aren't transferred from your old phone:

- Downloads, like PDF files
- Apps that aren't from Play Store
- Accounts other than Google accounts
- Contacts and calendars for services other than Google (such as WhatsApp)
- Ringtones

Import contacts from SIM

If you have a SIM card with contacts saved on it, you can import them into your Google account.

1. Insert the SIM in your phone.

   Or, if your old phone is an Android phone and can connect to Wi-Fi, turn it on.

2. Open the Contacts app.
3. At the bottom, tap **Organize** > **Manage SIM**.
4. If your phone has dual SIMs, select the SIM.

5. Select where to save the contacts:
    - If you have multiple Google accounts, tap ⌄ and choose the account where you want to save them.
    - To save them to your phone, tap **Device**.
6. Select the contacts to import and tap **Import**.

Manage dual SIMs

About dual SIMs

When two SIMs are inserted:

- You see at the top of the home screen. If you see , troubleshoot the issue.
- Both SIMs can make and receive calls and text messages.
- Only the owner of the phone (not additional users or guests) can access dual SIM settings.

Use SIM profiles

Set up SIM profile

Set options based on how you expect to use the SIMs:

1. Go to **Settings** > **Network & internet** > **SIM preferences**.
2. Select the option that best meets your needs:
   - **Smart SIM**: Automatically select SIM for voice calls based on your call history. In Brazil, selection is also based on your contact's carrier.
   - **Personal and Work**: Use one SIM for personal and the other for work-related voice calls.
   - **Manual**: Choose which SIM to use for voice calls, for data, and for SMS.
3. Follow onscreen instructions to complete setup.

Change SIM profile

This information applies only to phones that support dual SIM cards and have both cards inserted.

1. Go to **Settings** > **Network & internet** > **SIM preferences**.
2. Touch **Dual SIM usage profile**.
3. Select a different profile and touch **CHANGE PROFILE**.
4. Select a new profile.
5. Follow onscreen instructions to complete setup.

To keep the same profile but adjust options for data, SMS, voice calls, video calls, or contacts:

1. Go to **Settings** > **Network & internet** > **SIM preferences**.
2. Touch each preferred SIM and contact option to change.

Change SIM name, color, ringtone

When two SIMs are inserted, you'll see them referenced in apps like Contacts, Messages, and Phone. The SIM name shows your carrier and, if you're using the Personal and Work profile, shows which it’s assigned to. You can rename the SIMs. You can also change SIM icon color to make them easy to differentiate.

1. Go to **Settings** > **Network & internet** > **SIM preferences**.

2. Tap the SIM to change.
3. Change settings as needed.

Set up voicemail

Set voicemail password

Contact your carrier for help setting or recovering your password/PIN for voicemail.

Set mailbox greeting

Your carrier provides and manages your voicemail.

To set your greeting:

1. Touch > .
2. Touch & hold to dial into your mailbox.
3. Follow your carrier's system prompts. If your voicemail is not set up, contact your carrier for instructions.

Change voicemail options

1. Touch > > **Settings**.

   (If you don't see , swipe down on the screen.)
2. Touch **Voicemail**.
3. If you have two SIM cards, touch the SIM for the account to change.
4. Change any of the options:
   - To change voicemail service from your carrier to a different service or app, touch **Advanced Settings** > **Service**.
   - To change the number dialed to access voicemail, touch **Advanced Settings** > **Setup**.
   - Your carrier might include additional options here, like notification and visual voicemail settings. Contact your carrier for help.

Set up email

Set up personal email

You can add multiple accounts of the following types:

- Gmail
- Personal email from other providers (IMAP/POP)

If you added a Google account on your phone:

- When you open the Gmail app for the first time, you'll see your email for that account. You're already set up.
- To set up additional accounts, open Gmail, touch your profile icon, then touch **Add another account**.

If you didn't add a Google account to your phone and want to set up email for an IMAP/POP provider (an address that's not Gmail):

1. Open the **Gmail** app.
2. Follow the onscreen instructions to enter your email address, password, and account options.

   If you have problems setting up the account, read Google's help for Gmail.

Set up corporate email

If you use Microsoft Office Outlook on your work computer, your phone can synchronize emails, calendar events, and contacts with the Microsoft Exchange server. Before you start, you'll need the following information from your company's IT department:

- Email address
- Email password
- Domain name
- Username
- Server name
- Security type/SSL settings
- Client certificate requirement

To set up corporate email:

1. Open the **Gmail** app.
2. Do one of the following:
   - If this is your first time opening the Gmail app, touch **Add another email address**.
   - If you have been using Gmail with another account, touch your profile icon, then touch **Add another account**.
3. Touch **Exchange and Office 365**.

4. Follow the onscreen instructions to enter your email address, password, and other information from your company's IT department.

Switch account views

In the **Gmail** app, touch your profile icon M, then select an account.

To open each inbox with one touch from your home screen, add task shortcuts:

1. Touch & hold .
2. Drag = for each account to a blank space on your home screen.

Make it yours

This topic lists things that most people want to do with their new phone, with links to instructions on how to do them.

Change its look and sound

- Set the wallpaper.
- Add apps to your home screen.
- Adjust screen settings, like font size, rotation settings, and dark background.
- You can use either the ◀ ● ■ buttons or gestures to move between apps and screens. Choose which Navigation mode to use.
- Assign ringtones or photos to friends you call.
- Set your schedule for Do Not Disturb, to automatically silence your phone when you don't want to be interrupted.

Protect your phone

- Set up a screen lock.
- Set up fingerprint security to unlock your screen safely and quickly with a touch.
- In case you lose your phone, set up Find My Device and record your IMEI number.

Other common set up tasks

- Connect with your Bluetooth devices and Wi-Fi networks.
- If you use multiple languages, set them up so they appear on your keyboard.

About your home screen

You see the home screen when you turn on and unlock your phone or swipe up from the bottom of the screen.

Swipe right or left to move between home screens.

What's on the screen

1. Status bar: Displays the time and icons that tell you about your phone's battery and network connections. Swipe down to see your notifications and quick settings and to turn your phone off.
2. Widget: You can add widgets to your home screen for quick access to information or frequent tasks.
3. Shortcut: You can add shortcuts to open apps or web pages you use frequently.
4. Favorites tray: Provides one touch access to your most-used apps from any home screen page. You can customize which apps appear here.
5. Navigation bar: Use gestures to move between apps and screens. You can use gestures but hide the bar. Or, you can replace the bar with the navigation icons instead.
6. Folder: Add folders to organize app shortcuts.

Add/remove screens

You can add more home screens to the right. To add a page, drag an app shortcut or widget to the edge of an existing page and place it on the new screen.

To remove a home screen, drag all apps, shortcuts, widgets, and folders off the screen. After you remove the last item, the home screen will be removed.

Customize your home screen

Organize it:

- Touch & hold an item you want to move, then drag it to the new location.
- Group icons into folders.
- Choose where to find your list of all apps: in the app tray or directly on the home screen.

Change how you get around: You can replace the navigation bar with the navigation icons.

Change how it looks:

- To see options for customizing wallpaper, widgets, and other home settings, touch & hold a blank space on the home screen.
- For an entirely new look and feel for your home screen, you can install a different launcher.

About your lock screen

The lock screen appears when you're using a screen lock and you power on your phone or turn on the screen.

What you can do from the lock screen

- Make an emergency call. Swipe up from the bottom of the screen.
- View and respond to notifications. Double touch one to open it.
- Open quick settings. Swipe down from top of the screen for your top four settings and notifications, then swipe again to see the rest.
- Start a voice command. Swipe up diagonally from either bottom corner.
- Go into Lockdown. Temporarily turn off notifications and fingerprint unlocking.

You can customize your lock screen to add a message and control what content and features appear.

If this is your first smartphone

Learn the basics

To get around your phone, here are the key concepts.

- You can choose how you move between apps and screens: gestures or ◀ ● ■ icons.
- In addition to tapping the screen to select items, you can use other gestures, such as pinch to zoom.
- The icons at the top of your home screen tell you important stuff at a glance, like your phone's battery level and network connection, and whether you've missed a call.
- Your phone and apps send you notifications for things like new messages, calendar events, and upcoming alarms. You'll find notifications in several places, and can do a lot with them.

To learn about these common tasks, tap one below:

- Answer a call
- Make a call
- Set an alarm
- Turn the flashlight on/off
- Listen to music

Get apps

Your phone comes with many fun and useful apps, but you can really unlock its power by installing apps that suit your lifestyle. Go to Play Store to explore free and paid apps that help you be more productive, organized, informed, in touch, and entertained.

Protect your phone

You carry your phone around with you, and accidents happen; phones get lost sometimes. So set up some security and prevent heartache if you and your phone become separated.

Set up a screen lock. This is your first line of defense in keeping your sensitive information safe. Prefer numbers, shapes, words? Set up a PIN, pattern, or password required to unlock your phone. Learn how.

A screen lock doesn't prevent you from immediately answering a call or accessing your camera.

Display your owner info. On your lock screen, you can discreetly display a "please return" message with some of your contact info so that, if your phone is lost, someone can return it to you. Learn how.

Enable lost phone features. For peace of mind, check out Find My Device, in case you ever need to remotely locate and lock or erase your phone.

Personalize your phone

While changing your wallpaper is probably your first customization, don't stop there. Be sure to explore your Settings to set ringtones, font sizes, data usage preferences, keyboard preferences, and much more. It's a great way to learn many of your phone's capabilities while customizing it to suit your needs.

In most apps you can tap ☰, ⋮, or your profile icon Ⓜ for app-specific settings. Be sure to see what options are available to you there, too.

Manage cellular data

Understand your data usage. Keep an eye on your data usage and learn how to make the most of it. See which apps use large amounts of data and adjust their settings. If your phone is using too much data, you can also stop accounts from auto-syncing.

Use Wi-Fi to conserve cellular data. When you connect to a Wi-Fi network, your data will use that network connection instead of your carrier's network, saving your cellular data for when you need it. Learn how to connect to Wi-Fi networks.

Useful to know

Find phone info. To find your phone number, device name, and other information, go to **Settings** > **About phone**.

Tell your phone what to do. Use your phone hands-free with voice commands. Tell it to navigate you, and listen to it speak the directions to you as you drive--it'll even reroute you if you've gone off course. Tell it to set alarms, find information on the web, make calls.

Store your stuff. You have several storage options. Store apps and content on your phone. For more storage space, use an SD card for photos, videos, and music. You can open stored items in associated apps, like Photos to see your photos and videos. For even more storage space, plus the ability to access your media and files from any internet-connected device (phone, computer, tablet), use cloud storage. Your Google account includes free cloud storage on Drive, which has its own app and is also available from the menu throughout other apps.

Wi-Fi hotspot. You can use your phone as a Wi-Fi hotspot to share your internet connection with your other devices that need internet access (for example, a laptop or tablet).

Reboot phone. In the unlikely event that your phone becomes unresponsive, frozen, shows a blank or black screen, or doesn't respond to the Power button, you can reboot it. Press & hold the Power button for 7 - 10 seconds. The phone will restart normally.

Certain features, services, and applications are network or carrier dependent and may not be available in all areas.

If you had an iPhone

Welcome to Android! Here are some differences between your old iPhone and your new phone.

Your assistant: You've retired Siri. Now, find info and get things done with Google Assistant. Just set up “Hey, Google”. Then ask for info or help with everyday tasks.

Apps:

- Goodbye Apple App Store, hello Google Play Store. Play Store is now your default app store. Apps aren't compatible between iPhone and Android. However, many developers make iPhone and Android versions of their apps; if the app stores your data online, then you can switch with little effort. Just download the Android version from Play Store and log in.
- Continue listening to podcasts. There are lots of podcast apps on Play Store - search for “podcast” in Play Store and download one of your choice.
- Install apps remotely. On a computer, visit play.google.com. Browse apps on the bigger screen and then install them on your phone from your computer.

Your home screen: Your old phone defaulted to show all apps on your home screen. With your new phone, you can put shortcuts to your most important apps on your customizable home screen for easy access. This frees up room on your home screen for widgets, making your new home much more lively.

Privacy indicator: On Android, a green indicator means either your camera or mic are being used by an app. On iPhone, an orange indicator means the mic is being used and a green indicator means the camera is being used.

In the cloud: Your Google account is your key to cloud storage with Google. If you migrated your contacts to your phone, then you can see them from any device or computer by logging into Gmail. Your Google account includes apps like Calendar and Drive that let you work well with others. And it has apps that let you play too - access your photos, videos, music from any device when you log in with your Google account. Use YT Music to upload your iTunes library. For help signing in to your account, read Google's support information.

File sharing: If you used AirDrop on your iPhone, now you'll use Quick Share to easily share files or links with friends.

About your Google account

Benefits of your account

When you set up your phone, you added a Google account. If you haven't had a Google account before, this is more than just a password you set up for your phone.

A Google account lets you organize and access your personal information and files from any computer or mobile device:

- **Synchronize everything.** Never lose your contacts. Associate them with your Google account if you create contacts on your phone, and view them from Gmail on any computer or by signing into your Google account on any phone. Create emails or calendar events on your phone and view them on any computer. Access your browser bookmarks from any device.
- **Store in the cloud.** Upload your photos, videos, and music to the cloud; get to all of it without taking up space on your phone.
- **Keep your stuff secure.** Your account password secures it all and lets you access it from anywhere.

Maintaining your account

Other than remembering your password, you don’t need to do much maintenance on your Google account - just enjoy the benefits of your secure, synchronized information. However, you can:

- Control how frequently your phone syncs your information.
- Review and manage the information Google collects from you, such as search and browsing history.

Learn about Google apps

Many Google apps, like Gmail, Chrome, Photos, and Maps are preloaded on your phone. To learn about and download additional Google apps, read Google’s help.

Can't sign in to Google account

If you’re having problems signing in to your account, read Google's support information.

Status bar icons

About status icons

The status bar at the top of the home screen contains icons that help you monitor your phone.

- **On the left,** icons tell you about apps, such as new messages or downloads. If you don't know what one of these icons means, swipe the status bar down for details.
- **On the right,** icons tell you about your phone's battery level and network connections.

A dot means there are more icons to view. Drag down from the top of the screen to see all icons.

What status icons mean

These are the icons from apps that came on your phone and the phone status icons.

Icon	Meaning
	CALLS
	Active call.
	Missed call.
	Speakerphone on.
	Microphone muted.
	NETWORK
	Connected to cellular/mobile network (full signal). Speed of your network connection is also shown. Possible speeds, from slowest to fastest, are 3G, H, H+, 4G, 5G. Available speeds depend on your carrier and your location.
	Connected to different cellular/mobile network (roaming).
	Data Saver is on, preventing apps from using background data.

	Wi-Fi network within range.
	Connected to Wi-Fi network.
	No SIM card.
	Location services are in use.
	Airplane mode on.
	CONNECTIVITY
	Trusted device connected.
	Your phone is a Wi-Fi hotspot. Devices can connect to share your data connection.
	Wireless display or adaptor connected.
	Connected by USB cable.
	USB tethering enabled.
	NFC enabled. Only some versions of this phone, sold in certain countries, support this feature.
	SYNC AND UPDATES
	App updates are available for download from Play Store.
	Email and calendar sync in progress.

	Upload complete.
	Download complete.
	Google backup in progress.
	Google backup complete.
	SOUND
	Vibrate.
	DO NOT DISTURB
	Do Not Disturb is on.
	BATTERY
	Battery fully charged.
	Battery charging.
	Battery low.
	Phone is in Battery saver mode.
	ALARM AND CALENDAR
	Alarm set.
	Upcoming calendar event.

	EMAIL AND MESSAGING
	New Gmail message.
	New text message.
	New voicemail.
	Important alert.
	OTHER ICONS
	Privacy indicator. An app is using your microphone or camera.
	Screen recording in process.
	Focus mode is on.

Apps that you download might show other icons to alert you about their status.

Certain features, services, and applications are network or carrier dependent and may not be available in all areas.

Phone terms you should know

Airplane mode
This mode allows you to use your phone's non-wireless functions (music, games, etc.), while disabling its wireless radio functions that are banned on airplanes during flight.

app
Software that you can download for added functionality, such as games, email apps, bar code scanners and more. Some apps are already on your phone, and more can be downloaded from your phone's app store.

Bluetooth™
A short-range wireless technology you can use to connect a device to other nearby Bluetooth-capable devices and accessories, such as headsets, speakers, printers, etc. Use Bluetooth to make handsfree calls on a headset or in your car, listen to music on wireless speakers, use a wireless mouse or keyboard, or print a document in another room. Set up Bluetooth.

cellular network or mobile network
A network of radio-transmitting towers. You make calls on your phone using radio waves sent between the phone and the network towers. You also send data and access the Internet on this network. Carriers use different technologies to handle these radio transmissions (GSM, CDMA, Edge, 3G, 4G, LTE, HSPA, iDEN).

data
Information sent or received from your phone other than calls and text messages. You may use data when you access the internet, check your email, play games, use apps and more. Background tasks, such as syncing or location services, may also use data.

data usage
The amount of data your phone uploads or downloads over a network in a given period. Your phone uses your carrier's cellular network or over a Wi-Fi network. Depending on your plan with your carrier, you may be charged additional fees when your data usage exceeds your plan's monthly limits.

GPS
Global Positioning System. A global satellite-based system for determining precise locations on Earth.With GPS, your phone becomes your navigator when you're driving and your concierge when you're looking for a nearby meal, movie, or cup of coffee.

mobile hotspot
A device or app that lets you share your mobile data connection with multiple devices via Wi-Fi. You can connect different devices to your hotspot, including notebooks, netbooks, MP3 players, cameras, Smartphones, and portable gaming systems. The number of devices that can connect at one time depends on your carrier and connection speed.

NFC
Near-field communication. A wireless technology that transfers information between two compatible devices. Tap the devices together to share web addresses, contact info, apps, GPS locations and more.

notification
An alert from your phone or an app on your phone. Your phone displays icons in the status bar to notify you of new messages, calendar events and alarms. Icons can also indicate ongoing status, such as connection to a Wi-Fi network.

Play Store
Google's store where you can download apps, books, movies, and music. Choose from an assortment of free books or apps; purchase from an even larger selection.

SD card
Secure Digital (SD) card. A small, high-capacity removable memory card used in small, portable devices such as mobile phones, tablets, and digital cameras.

shortcut
An icon you can add to your home screen that lets you quickly open an app. Create shortcuts for apps you use frequently.

SIM card
Subscriber Identity Module (SIM) card. A card that securely stores information your carrier uses to authenticate your phone on the cellular network.

software update
An update to your phone's operating system that typically includes new features and fixes reported problems. The update is wirelessly downloaded to your phone at no additional cost to you.

status bar
Thin bar at the top of your home screen that displays the time and icons that tell you about your phone's battery and network connections. Apps display icons in the status bar to alert you of events, such as new messages.

sync
The process of sharing the same information across multiple devices and websites. Contacts, calendars and email are often synced through cloud services, so you can enter information on one device and access it through another.

widget
An element you can add to your home screen that gives you quick access to information or frequent tasks. For example, widgets can provide weather updates, upcoming calendar events. Many are preinstalled on your phone. Apps you download may also include widgets.

Wi-Fi
A short-range wireless technology that provides a high-speed internet connection to wireless data devices. Many locations offer Wi-Fi connections, including airports, hotels, restaurants and more. Using a Wi-Fi connection instead of your cellular network can help reduce your cellular data usage. Some public Wi-Fi connections may not be secure. You should only connect to those you trust and use some form of internet security on your devices. Set up Wi-Fi.

Certain features, services, and applications are network or carrier dependent and may not be available in all areas.

Learn gestures

You can use gestures on your screen to move between apps and choose or manipulate items.

There are also gestures, which you can turn on/off, to perform everyday tasks like screenshots or turning on the flashlight.

Tap, drag, swipe, zoom

Gesture	Description
Tap	Press briefly with one finger and lift. Result: Open something (app or email) or choose something (checkbox, icon).
Touch & hold	Press and wait before lifting one finger. Result: Select something (app icon, text on a page) and see possible actions. Try it: Touch & hold text on this page to see the copy feature.
Drag	Touch & hold an item and then, without lifting, slide your finger until you reach the target position. Result: Move elements on the screen; for example, change a toggle from on to off . Try it: Drag an app shortcut from one spot on your home screen to another.
Swipe	Quickly move one finger across the screen, without pausing when you first touch (so you don't drag instead). Result: Switch between home screens or between tabs in an app. Or, move quickly through a list. You can swipe different directions (up, down, left/right) for different results. Learn more. Try it: Open the Phone app and swipe left/right to switch between tabs. Or, swipe up from the bottom of this screen to go home.
Pinch out to zoom	Put two fingers on the screen and then drag them apart. Result: Zoom in to see larger version of photos and maps. Or, open expandable notifications. Try it: Open a photo and pinch out to zoom in on an area.

Tip: If you have visual impairments, you can enable additional magnification gestures.

Pinch in to zoom	Put two fingers on the screen, far apart, and then drag them together. Result: Zoom out to see smaller version of photos or maps. Or, close expandable notifications.

Use gestures with Power button

Press
Lock and unlock the phone. You'll enter your PIN, pattern or password to unlock. To turn off the phone, press the **Power** + **Volume up** buttons simultaneously.

Press twice
Open the camera. If this doesn’t work, check that the setting is turned on.

Press & hold
Start a voice command.

Tap
Unlock with your fingerprint, if you've set up fingerprint security.

Move between apps and screens

Choose how to get around

If you see the navigation bar at the bottom of the screen, or you see no icons at all, you are using **Gesture navigation**.

If you see ◀ ● ■ at the bottom of the screen, you are using **3-button navigation**.

You can change how you move between apps and screens: **Settings** > **Gestures** > **Navigation mode**.

Use gesture navigation

Use these gestures to move between screens and apps if you chose Gesture navigation and you don't see the ◀ ● ■ icons at the bottom of your screen.

Action	Gesture to use
Switch between apps	At the very bottom of the screen, swipe left or right.
See all recent apps	Drag up from the bottom, hold, then let go.
See all apps	Swipe up from the bottom of the **home** screen.
Go back	Swipe towards the middle from the left or right edge of any screen.
Go home	Swipe up from the bottom of any screen.
Open Google Assistant	Swipe diagonally from either lower corner of the screen.

Tip: For even more gestures, turn on One-handed mode.

Use 3-button navigation ◀ ● ■

Use these icons to move between screens and apps if you chose 3-button navigation.

◀ takes you back one screen.

- returns you to the home screen from any app.
- lets you switch between recent apps.

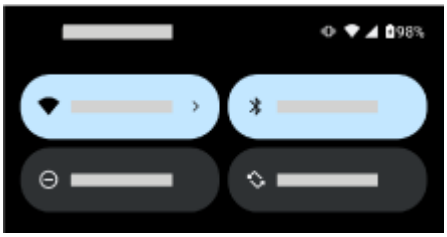
Tip: For visual assistance, you can add to open the Accessibility Menu.

Use quick settings

Open quick settings

Settings you adjust frequently, like Bluetooth, are “quick settings”, easy to get to from any screen.

To see your first few quick settings, swipe down once from the top of your screen.



Swipe down again to:

- See all quick settings. You can swipe left for more.
- Open the full list of settings available in the Settings app by tapping .
- Turn your phone off .

Adjust quick settings

To adjust screen brightness, slide .

To adjust other settings:

- **Tap** an icon to toggle the setting on/off.
- **Touch & hold** an icon to adjust related settings.

Icon	Setting
	Wi-Fi
	Mobile data
	Bluetooth
	Do Not Disturb

Auto-rotate

Control compatible smart devices

Wi-Fi calling

System update

Dolby Atmos

Flashlight

Airplane mode

Hotspot

Quick Share

Alarm

Battery saver

Screen Record

Camera access

Mic access

Data Saver (Appears after you turn on Data Saver the first time.)

Bedtime mode (Appears after you turn on Bedtime mode the first time.)

Scan QR code

Family Space

Security & privacy

Color inversion (Appears after you turn on Color inversion the first time.)

Extra dim (Appears after you turn on Extra dim the first time.)

Open all settings

To open the full list of all settings:

- Open quick settings and tap .
- Or, open the **Settings** app.

Tip: Search the Settings app to find what you need quickly. Just tap at the top of the app and type your search term.

Customize quick settings

Add, remove, rearrange quick settings

You can rearrange quick settings, putting your most used at the top. You can also add or remove them.

1. Open quick settings.
2. Tap .
3. Drag tiles to rearrange. Or swipe up to add new tiles.

To return quick settings to its original state, tap > **Reset**.

Pin/unpin media player in quick settings

When you leave a media app that allows you to listen in the background while you use other apps on your phone, playback switches to the media player, which opens in quick settings and also appears on your lock screen for convenient control.

To let you continue listening from where you left off, the media player is pinned to its spot in quick settings. When it's pinned, you can't swipe it to close it.

To swipe the media player to close it and remove it from quick settings until you play something again, unpin it:

1. Open quick settings, touch & hold the media player, and touch .

   Or, go to **Settings** > **Sound & vibration** > **Media**.

2. Turn **Pin media player** off .

To pin the media player to its spot in quick settings:

1. Open quick settings, touch & hold the media player, and tap .

   Or, go to **Settings** > **Sound & vibration** > **Media**.

2. Turn **Pin media player** on .

Apps that support background playback

While some apps like YouTube and require a premium paid subscription to play in the background and won't open in the media player using the free version, many media apps such as Spotify, Pandora, and Amazon Music do support background playback in their free versions.

To find more apps, open Play Store and search for "free background playback".

Change style for quick settings & notifications

1. Go to **Settings** > **Home & lock screen** > **Control center**.
2. Choose the option you want:
   - To see quick settings and notifications together on the same screen when you swipe down from the top, select **Classic style**.
   - To separate quick settings and notifications on individual screens when you swipe down from the top RIGHT (quick settings) or top LEFT (notifications), select **Modern style**.

Show/hide quick settings & notifications on lock screen

1. Go to **Settings** > **Home & lock screen** > **Control center**.
2. To access quick settings and notifications from the lock screen, turn on **Allow access to quick settings and notifications drawer on Lock screen**.

   Or to hide them from the lock screen, so you can only see them after unlocking the phone, turn it off .

Turn screen off and on

Why your screen turns off automatically

- **To save battery power,** your screen turns off if you haven't used it for some time. You can lengthen or shorten the time before your screen automatically turns off.
- **When you bring the phone to your face to speak into it during calls**, the screen turns off to prevent accidental touches. When you pull the phone away from your face, the screen turns on so you can use it. (If the screen stays dark, follow these steps.)

Turn screen off and on manually

To turn the screen off:

- Press the Power button. When you set down your phone, it's good habit to do this. You prevent accidental touches, save a bit of battery, and keep it secure with the screen lock.
- To keep your screen off and phone quiet when you don't want interruptions, like at night, use Do Not Disturb settings.

To turn the screen on:

- Press the Power button. If you've set up a screen lock, you need to unlock it.
- Tap the lock screen twice. (If this doesn't work, turn the gesture on.)
- If you've added your fingerprint to the phone, touch the sensor to wake and unlock your phone.
- Your screen automatically turns on when you have an incoming call.

Turn off phone

Swipe down from the top of the screen **twice**, then tap and **Power off**.

Or, use the buttons on the side of your phone. Press the **Power** + **Volume up** buttons simultaneously, then tap **Power off**.

Tip: To press & hold only the Power button (instead of Power and Volume up) change the Power button gesture.

Turn flashlight on and off

To turn your flashlight on or off:

- Open quick settings and tap .
- Or, make a chopping motion.

To control the chop gesture:

1. Go to **Settings** > **Gestures**.
2. Tap **Fast flashlight** and turn it on or off.

Scan QR codes

1. Open quick settings and tap .
2. Frame the code. If it isn't automatically detected, move the camera closer or farther away.
3. When the code is detected, use options to open a website, copy/paste, or share the information.

Record audio notes

Record a note

1. Open the **Sound Recorder** app.
2. To start recording, tap .
3. If needed, tap to pause and to resume recording. To add a tag in the recording that you can skip to during playback, tap .
4. To stop recording, tap .
5. To move a saved recording to a folder:
   - Tap by the recording you want to move, then tap **Add to folder** and choose the folder.
   - To add a new folder, tap , give it a title and save it. Then, tap the folder.

To trim or edit a recording, search for “audio file editor” in Play Store to select and download an app.

Schedule a recording

Automatically start recording at a set time for a set duration.

1. Open the **Sound Recorder** app.
2. Tap > **Scheduled recording**.
3. Set the time & duration.

   When you’ve scheduled a recording, you’ll see in the status bar. When recording begins, the icon changes to and you'll see indicating your microphone is in use.
4. To return to the Sound Recorder to pause or stop recording, swipe down from the top of the screen and touch its notification.

To cancel a scheduled recording, tap , then turn **Scheduled recording** off .

Listen to recordings

You can listen to and share audio recordings in Sound Recorder or other apps.

1. Open the **Sound Recorder** app.
2. Tap .

3. To play a recording in the list, tap ▶.

   Or, for more control over playback, open the recording in the player. Touch the file, then:

   - Drag the playback screen to move forward or backward through the recording.
   - If you added tags, tap next › or previous ‹ to skip to one.
   - To temporarily mute playback, tap . To unmute, tap .

Manage recordings

View recording list and details

1. Open the **Sound Recorder** app.
2. To see your recording list, tap .

   Beneath the name of each recording, you'll see the date and recording length. Tap > **View details** for file size and storage location.

Rename recordings

1. In the recording list, touch & hold the recording.
2. Tap > **Rename**.
3. Enter a new name and tap **Save**.

If you want to name your recordings before you save them, tap and turn **Auto save** off .

Delete recordings

1. In the recording list, touch & hold a recording. Then tap others to select more.
2. Tap .

Share recordings with a person or app

1. In the recording list, touch & hold a recording. Then tap others to select more.
2. Tap .
3. Select the app or contact to share with.

Change voice quality/file format

1. In the **Sound Recorder** app, tap > **Voice quality**.
2. Select the sound quality for future recordings.

   MP3 or AAC files are higher quality and typically larger. AMR files are typically smaller. Check the apps or devices you intend to use for playback to see what file formats they support.

Control phone with your voice

Speak a command

Not all languages support voice commands.

You can tell Google Assistant to call people, get directions, send messages, set alarms. Or, ask questions.

1. Get your assistant's attention by doing any of these:
   - Press & hold the Power button. If this doesn't work, turn the gesture on.
   - For hands-free control, say “Hey Google” or “OK Google”, if you've taught it to recognize your voice.
   - Swipe up from the bottom left or right corner of your phone. Learn more.
   - Tap .
2. Ask a question or say a command. For example, you can say “What's the weather today?” or “Set alarm for 7 AM tomorrow.”

   Tip: To see a list of commands, say “Help”.
3. To silence Google Assistant when it's talking to you, tap .

   Google Assistant will stop listening after a few seconds.

To learn about changing settings for Google Assistant, read Google's help.

Teach Google Assistant to recognize your voice

1. Open the Google app, then tap your profile icon > **Settings** > **Google Assistant** > **Hey Google & Voice Match**.
2. Turn on **Hey Google** and follow the onscreen instructions to record your voice.

Fix an issue

If your phone isn't recognizing “Hey, Google” commands:

1. Is Battery saver on?

   If it's on, you need to get your assistant's attention by touch instead of voice, or turn off Battery saver.

   If it's off, then follow the remaining steps.
2. Open the Google app.
3. Tap your profile icon > **Settings** > **Google Assistant**.
4. Tap **Hey Google & Voice Match**.
5. Tap the option to retrain your voice model.

Get directions to a location

Navigation and battery life

Navigation is one of the most power-intensive apps, so when possible keep your phone plugged into a high-quality charger, especially if you're streaming music and/or using Bluetooth (also power-intensive features).

Get turn-by-turn directions with voice readout

Follow directions on a map in real-time, with or without voice readout. Get traffic updates and rerouted around issues on the way to your destination.

1. Call the assistant:
   - Press & hold the Power button. If this doesn't work, turn the gesture on.
   - If you set up voice recognition, say “Hey Google.”
2. Say “Navigate to [destination].”

   You can say the name of a place or give an address.

To learn about setting a time of arrival, seeing street view, and other features, read Google's help.

Add Directions shortcut to home screen

Use the Directions widget to create a home screen shortcut to your destination before you leave. When you're ready to travel, tap the shortcut, and your phone will navigate to the destination.

1. Touch & hold a blank space on your home screen and tap **Widgets**.
2. Scroll to **Maps** and tap .
3. Touch and hold the **Directions** shortcut, then drag it to your home screen.
4. Enter the destination and shortcut name, then select any other options and tap **Save**.

Tip: Organize your Directions shortcuts into a folder on your home screen.

Get directions to home or work

Get directions from anywhere to your home or work addresses with one touch by setting up a task shortcut for the Maps app:

1. Touch & hold .
2. Drag to a blank space on your home screen.
3. If you haven't set your home or work address yet in Maps, touch the shortcut and follow the onscreen instructions to add it.

When you're ready to roll, just touch the shortcut, and your phone will talk you through the directions.

Use clock and weather widget

Add Moto Widget to home screen

Put a clock on your home screen and get quick access to alarms, your calendar, and the weather.

1. Touch & hold the home screen.
2. Tap **Widgets**.
3. Tap **Moto Widget** to view different styles of the widget to add:
   - For a simple widget with few icons and a digital clock (not analog), choose **Clean**.
   - For a basic analog clock with weather and your calendar, choose **Classic**. The outer ring shows remaining battery.
   - For a transparent widget that doesn't obstruct your wallpaper, with a choice of digital or analog clocks, and individual panels so you can swipe ▾ between weather, time, and settings, choose **Beyond**.
   - For a highly customizable widget that can show or hide date, time, weather, battery, alarms, fitness tracking, and more depending on how you size the widget, choose **Adapt**.
   - To see daily and hourly forecasts (no clock, calendar), choose **Weather**.
4. Touch & hold the style you want, then drag it to your home screen and release.
5. Follow onscreen instructions to set up the widget.

Customize and use the widget

Resize it

Touch and hold the widget to show its frame, then drag a side. Some widgets show more information when you expand their size.

Move it

Touch & hold the widget, then drag it around your screen or to a new panel. Release to place it.

Change clock style

Your phone came with the Clean style of the Moto Widget, which only has a digital clock. To use an analog clock, remove the widget (touch & hold, then drag it to **Remove**), then add a different style for the Moto Widget, or add a different clock widget.

Quickly access alarms, calendar, and weather

For alarms, tap the **time** to open the Alarm tab in the Clock app. Tap other tabs to use the timer or stopwatch. Learn more about alarms.

To open the Calendar, tap the **current date**. You can view or add events.

For weather information, tap **Add cities** or your current weather conditions in order to:

- Turn on location to track the weather wherever you are.
- Add cities, locations, and regions to track their weather.
- View weather forecasts and other information.
- Adjust other weather settings, including notifications. In your weather app, look for onscreen instructions, or tap ☰ or ⚙ for settings and help.

Add other clock and weather widgets

Other apps offer their own widgets you can add to your home screen, in addition to the Moto Widget.

1. Touch & hold the home screen.
2. Tap **Widgets**, then:
   - Tap **Clock** for a stopwatch or other types of time widgets.
   - Tap your weather app for other types of weather widgets.
3. Touch & hold the widget you want to add, then drag it to your home screen and release.
4. Follow screen instructions to customize the widget

For other widgets, 🔍 search for “clock widget” or “weather widget” in and install one.

Manage how you spend time on your phone

Understand your habits

1. Go to **Settings** > **Digital Wellbeing & parental controls**.
2. Review the chart to see:
   - Time you spent using phone today
   - Which apps you've had on screen and for how long
   - How often you unlocked the phone today
   - How many notifications you've gotten
3. For more information, touch a label on the chart. For example, to see your screen time for the week, touch today's usage time.

Limit daily screen time

For individual apps, you can set a timer that limits the amount you use the app daily.

Tip: To manage your child's screen time, use parental controls.

To set an app timer:

1. Go to **Settings** > **Digital Wellbeing & parental controls**.

   Or, **Settings** > **Apps** > **Screen time**.
2. Next to the app you want to limit, touch and tap the chart.
3. Set the total time that you can use the app per day.

When you reach your time limit in an app:

- The app closes.
- Its icon dims and no longer opens the app.

The app timer resets at midnight. To use the app before midnight, go back to the timer in **Settings** and extend its time or delete the timer.

Pause distracting apps to focus

Use Focus mode to pause selected apps for fewer distractions.

1. Go to **Settings** > **Digital Wellbeing & parental controls** > **Focus mode**.
2. Mark apps you want to pause.
3. Do one of the following:
   - To turn it on, touch **Turn on now**.
   - To have it turn on automatically, touch **Set a schedule**, then select days of the week and start/end times.

When Focus mode is on:

- You'll see (○) in the status bar.
- You won’t be able to use the selected apps and won’t get notifications from them.

Tip: To add (○) Focus mode to quick settings, open quick settings, touch ✎, then drag the tile where you want it.

To turn Focus mode off:

- Open quick settings and touch (○).
- Or, on the notification, touch **Turn off now**. (To turn it off for a short period, touch **Take a break**.)

To remove the schedule:

1. Do one of the following:
   - Open quick settings, then touch & hold (○).
   - Go to **Settings** > **Digital Wellbeing & parental controls** > **Focus mode**.
2. Next to Schedule, touch 🗑.

Tip: To mute sounds, stop vibration, and block notifications for all calls and notifications, use Do Not Disturb.

Make it easier to put your phone away at bedtime

You can schedule changes to get ready for sleep.

1. Go to **Settings** > **Digital Wellbeing & parental controls** > **Bedtime mode**.
2. Select when to turn on **Bedtime mode**.
3. Adjust start and end times if needed.
4. Touch **Customize** to set what your phone should do during this scheduled time:
   - Silence your phone (turn on **Do Not Disturb**).
   - Use grayscale or dimmed color and light (touch **Screen options at bedtime**).

Use parental controls

You can:

- Control your child’s access to devices and apps
- Control location settings and view the location of your child’s supervised device
- Set daily usage limits, monitor app usage, and remotely lock supervised devices
- Set filters and controls on what your child can browse, purchase, or download using Chrome, Google Search, Play Store, and YouTube

You’ll need to set up parental controls on your and your child's devices.

To set up parental controls on this phone:

1. Go to **Settings** > **Digital Wellbeing & parental controls**.
2. Touch **Set up parental controls**.
3. Follow onscreen instructions to set up the phone for child or adult usage.
4. To set up parental controls on the other device, refer to the help for that device.

To learn more, read Google's help.

Use onscreen keyboard

Open, close, rotate keyboard

To open the keyboard, just touch an area where you can enter text or numbers.

To close the keyboard so you can see other parts of the screen, tap .

For a larger keyboard, turn your phone horizontally. (If your screen doesn't rotate, check your auto-rotate setting.) You can also resize the keyboard to give yourself extra space for more accurate typing.

Tip: If you installed multiple keyboards, you'll see next to the navigation buttons when you're typing. To switch to a different keyboard, touch .

Type special characters

Touch & hold a key to see related special characters. For example:

- Touch & hold **.** to see other punctuation marks.
- Touch & hold **e** to see **ê**, **é**, **è**, and **ë**.

Tip: To insert a period followed by a space, tap the spacebar twice quickly.

Capitalize letters

To type in ALL CAPS, touch twice, quickly, so you see . Touch it once more to turn ALL CAPS off.

To change capitalization of a word you've already typed:

1. Select the word.
2. Touch until you see the capitalization you want: first letter only, ALL CAPS, or lowercase.

Use glide typing

You have two options for entering text: type one letter at a time (multi-touch typing) or slide your finger through all the letters in a word using one continuous motion (glide typing). Start typing either way and switch whenever you like.

When you're using glide typing, you can:

- **Type a word.** Drag your finger over the letters in the word.
- **Enter apostrophes in common words.** Drag through the letters and the apostrophe is automatically inserted.
- **Add a space.** There's no need to use the space bar. Just lift your finger and start the next word.

You can disable glide typing.

Get suggestions

Use suggestions to type faster.

When you're typing, you'll see a list of suggested next words above the keys:

- Touch a word in the list to insert it in your text.
- If you don’t like a suggested word, touch & hold it, then drag it to .

You can limit or turn suggestions off.

Spell check and auto correct

Misspelled words are automatically corrected as you type.

To prevent that word from being auto-corrected again, add it to your dictionary by touching the word in the list of suggestions above the keys.

If auto-correction is turned off, you can still check spelling:

1. After you're done typing, review your text; misspelled words (and words not in your dictionary) are underlined.
2. Touch an underlined word:
    - If the word is spelled correctly, touch it in the suggestion bar.
    - If the word is misspelled, select the correct word in the suggestion bar or type the correction.

Type in multiple languages

If you have added multiple languages as a system language in your phone settings, keyboards and text suggestion are available for those languages:

- When using a keyboard language other than your primary system language, available keyboard languages are shown on the spacebar.
- To toggle between languages, touch .
- To see a list of available keyboards, touch & hold or the spacebar.

You can add keyboards for other languages.

Cut, copy, paste text

You can select and copy text from web pages and messages.

1. To select text, touch & hold a word.
2. Touch **Copy**, **Cut**, **Share**, **Select all** or:
   - Select more text. Drag the sliders .
   - Get information about selected text. Touch **Web Search**.
   - Translate selected text. Touch **Translate**. (If you don't see this option, install the Google Translate app.)
3. To paste text, touch to insert at the cursor or select a block of text to replace. Then touch **Paste**.

Tips:

- In some apps, you need to double-tap a word to select it (instead of touching & holding it).
- When you use **Copy**, the text is copied to the clipboard in your phone's memory, overwriting previous text in the clipboard. If you want to save and manage everything you copy into the clipboard, search for “clipboard manager” in Play Store to select and download an app.

Use voice typing

1. Touch a text field to show the onscreen keyboard.
2. Touch on the onscreen keyboard.
3. Say what you want to type:
   - Speak naturally but clearly. There's no need to shout or hold the phone close to your mouth.
   - To include punctuation, say “comma,” “period,” “question mark,” or “exclamation point.”
   - To pause or restart, touch .
   - To delete a word, touch .

You can also use your phone hands free by speaking voice commands.

Fill in forms automatically

Don’t retype your personal information again and again. Save it securely, then with just one touch, fill in passwords, addresses, credit cards, and other information saved to your Google account.

To set it up:

1. Go to **Settings** > **Privacy** > **Autofill service from Google**.
2. Tap categories to review and edit personal information, addresses, credit cards, and passwords.

Change wallpaper

You can change the background image on your home screen or lock screen.

Set the wallpaper

1. Touch & hold a blank area on your home screen, then tap **Wallpapers**.
2. Do one of the following:
   - To set a single wallpaper, select a photo or wallpaper.
   - To use an animated background, select a dynamic wallpaper. Many dynamic wallpapers include settings. Look for or to set options.
   - If you select a wallpaper from a category (such as landscapes), you can see a different image every day. Open the category and touch icon.
3. Tap or **Set**.
4. Select whether you want to use the wallpaper on your home screen, lock screen, or both.

If your photo is too large
Open the photo and take a screenshot of it. Then edit the screenshot as needed and set it as the wallpaper.

If you selected a dynamic or interactive wallpaper

If your battery is low, temporarily change wallpaper to a static image to save power.

Create a stylized wallpaper

Stylize your photos with AI visual effects and use them as wallpaper.

1. Touch & hold hold a blank area on your home screen, then tap **Wallpapers** > **Stylize**.
2. Select an image.
3. Select a style to apply to the image.
4. Tap **Set**, then follow onscreen instructions to apply it.

Customize your Favorites tray

The Favorites tray at the bottom of your home screen gives you quick access to your most-used apps. You can customize the shortcuts in this tray.

Change app shortcuts manually

1. Touch & hold one of the app shortcuts, then drag it up and drop it on **Remove**.
2. Swipe up from the bottom of the home screen to open your app list.
3. Touch & hold the app you want. When the new shortcut appears, drag it to the empty spot in your tray.

Tip: You can also use folders in your Favorites tray.

Change app shortcuts automatically, based on usage

To have your phone automatically update these shortcuts with apps you use most often:

1. Touch & hold a blank space on your home screen.
2. Tap **Home settings** > **Home screen style**.
3. Next to **App tray**, tap .
4. Turn **Suggestions on Home screen** on .

Fix an issue

If the apps in your Favorites tray are being replaced by apps you haven't selected and you don't want them to change, try these troubleshooting steps.

Use widgets, shortcuts, or folders

Add widgets

Widgets stream information, giving some of an app's functionality without opening the app. For example, the Calendar widget shows your daily agenda and gives you one-touch access to your full calendar.

Add widget

1. Touch & hold the home screen.
2. Tap **Widgets**.

   Widgets are listed under their related apps.
3. Touch & hold a widget to add it.

Adjust widget's size

You can make some widgets larger to view more content:

1. Touch & hold the widget until it's highlighted.
2. Release it to see an outline.
3. Drag a corner or side to resize.

Add shortcuts

On your home screen, you can add shortcuts to apps, so you don't have to open the tray and sort through all of your apps, shortcuts to common tasks, and shortcuts to open specific web pages.

Add app shortcuts

1. Swipe up from the bottom of the home screen to open your app tray.
2. Touch & hold the app you want.
3. Drag the app to an empty spot on your home screen. Or, drag it to the edge of the screen and drop it onto a new home screen.

Add task shortcuts

Many apps include shortcuts to common tasks, so you don't have to open and navigate the app.

1. Touch & hold an app icon to see available task shortcuts.
2. Do one of the following:
   - To perform the task, tap it.
   - To create a shortcut for that task, drag ═ to an empty space on your homescreen.

Here are examples of task shortcuts for various apps. Not all apps include task shortcuts.

App	Task shortcuts

Gmail	• Compose new email • Open to specific account
Maps	• Navigate to Work • Navigate to Home
YouTube	• Search • Subscriptions • Explore
Chrome	• New incognito tab • New tab
Calendar	• New reminder • New event • New task
Messages	• Open most recent conversation • New conversation
Clock	• Start screen saver • Start stopwatch • Create new timer • Create new alarm
Settings	• Bluetooth • Battery • Data usage • Wi-Fi

Add web page shortcuts

1. Open the **Chrome** app.
2. Navigate to the web page.

3. Tap > **Add to Home screen**.
4. Edit the name if desired.
5. Tap **Add**.
6. Do one of the following:
   - Touch & hold the icon to drag it where you want on the home screen.
   - Tap **Add to Home screen**.

Add folders

Folders organize your shortcuts. You can create folders on your home screen or in your app tray.

Home screen folders

To create a folder on your home screen:

1. Touch & hold an app shortcut on your home screen.
2. Drag it onto another to group them together, then release when you see a frame around them.

3. To name the folder, tap to open it, then tap **Edit Name** and type a new name.

To add apps to the folder:

1. Touch & hold the app's icon.
2. Drag it onto the folder.

To remove apps from the folder:

1. Open the home screen folder.
2. Drag the app's icon onto the home screen, or drag it up and drop it on **Remove**.

App tray folders

To create a folder in your app tray:

1. Open the app tray.
2. Tap > **Create folder**.
3. Type the folder's name.
4. Tap app icons to select what to put in the folder.
5. Tap **Done**.

To change apps in the folder:

1. Touch & hold the folder.
2. Tap **Edit**.
3. Tap app icons to add or remove them.

To add one app to the folder:

1. Touch & hold the app's icon.
2. Tap ⊕.
3. Select the folder.

To remove one app from the folder:

1. Open the folder.
2. Touch & hold the app's icon.
3. Tap ×.

Remove widgets, shortcuts, or folders

To remove items from your home screen:

1. Touch & hold it until it vibrates.
2. Drag it to **Remove**.

   For app tray folders, tap × **Delete**.

App icons on the home screen are **shortcuts** to installed apps found in the app tray. Removing an app shortcut from the home screen doesn't uninstall the app. Learn how to uninstall apps.

To select a totally new user interface for your home screen, download a different launcher.

Arrange apps and control icon's look

Choose where to find apps: app tray or home screen

The app tray holds all of your installed apps. Swipe up from the bottom of the home screen to open the tray. This simplifies your home screen, showing only apps you choose to add as shortcuts.

To see **all** apps on your home screen instead, you can remove the app tray.

You can switch at any time.

1. Touch & hold a blank space on your home screen.
2. Tap **Home settings** > **Home screen style** and then:
   - To see all apps on your home screen, tap **Open**.
   - To see all apps in the app tray, tap **App tray**.
3. Tap to see more customizations, described below.

If you're using the app tray

You can make these customizations in Home settings:

- Turn on/off suggested apps at the top of the list and bottom of the home screen.
- If you don't want the app's icon added to your home screen when you install a new app, turn **Add app icons to Home screen** off. The icon is only added to the app tray.

If you're using Open to put all apps on the home screen

You can customize how app icons are arranged:

- To be able to position icons anywhere on the home screen, tap **Free arrangements**.
- To have icons move automatically to fill empty spaces, tap **Auto fill**.

Adjust icon size and names

You can make the app icons on your home screen and in the app tray larger or smaller. You can also remove or expand the names below the icon.

1. Touch & hold a blank space on your home screen.
2. Tap **Home settings**.
3. Adjust settings:
   - To make the icons smaller or larger, tap **Icon size** and move the slider to choose a size.
   - To remove the names below the icons, tap **App label** > **Don't show**.
   - To restore the names below the icons, tap **App label** > **2 rows** (full names) or **1 row** (short names).

Show or hide notification dots

You can control whether app icons show dots to alert you about unread notifications.

1. Touch & hold a blank space on your home screen.
2. Tap **Home settings**.
3. Tap **Notification dot on app icon**.
4. Turn **Notification dot on app icon** on or off.

Home screen rotation lock

When when you enable Auto-rotate, app screens will rotate with your phone's orientation. You can keep your home screen from rotating while other apps auto-rotate.

1. Touch & hold a blank space on your home screen.
2. Tap **Home settings**.
3. Turn **Allow Home screen rotation** on or off .

Remove Google feed

When you swipe to the farthest-left home screen, you'll see the Google news feed. To remove it:

1. Touch & hold a blank space on your home screen.
2. Tap **Home settings**.
3. Tap **Swipe Access** > **Nothing**.

   To add the feed back again, change **Swipe Access** to **Google feed**.

Remake your home screen with launchers

About launchers

A launcher app is what makes your home screen look the way it does and controls how you organize and interact with your apps. The launcher that came with your phone puts the Google search widget and a clock widget on the home screen. See what that home screen looks like and how you can customize it.

To totally change the look and feel of your home screen, you'll need to download a new launcher and update your settings to use it. Launchers often come with new wallpapers, gestures to interact with your phone, and customizable elements for your home screen.

You can always go back to the original launcher and home screen.

Get different launcher

1. Search for "launcher" in Play Store.
2. Read through the choices and download the one (or more) that you want.
3. To start using it, open the app or follow the onscreen instructions after downloading it.

Switch between launchers

1. Go to **Settings** > **Apps**.
2. Tap **Default apps** > **Home app**.
3. Select the launcher you want to use.

   To switch back to the standard home screen, select **Moto App Launcher**.
4. If the launcher has adjustable settings, tap ⚙ to change them.

Delete launchers

You can only delete launchers that you installed.

Touch & hold the launcher's app icon, then tap ⓘ > **Uninstall**.

Use a screen saver

Set up screen saver

While your phone is idle on a dock or charger, turn it into a desk clock, a photo frame to show off your pics, or more.

1. Go to **Settings** > **Display**.
2. Tap **Screen saver**.
3. Do any of the following:
   - To change screen savers, select one. To set options for that screen saver, tap **Customize**.
   - To preview your selection, tap **Preview**. Tap the screen anywhere (unlock if necessary) to return to settings.
   - To adjust when the screen saver starts (while docked, charging, or either), tap **When to start**.

Start screen saver

The screen saver automatically starts when you connect your phone to a dock or charger and the screen turns off.

To exit the screen saver and return to your home or lock screen:

- Press the Power button.
- Or, if you're using fingerprint security, touch the sensor.

To manually start your screen saver any time, go to **Settings** > **Display** > **Screen saver** and turn **Use screen saver** on .

Turn off screen saver

To prevent the screen saver from starting automatically:

1. Go to **Settings** > **Display**.
2. Tap **Screen saver**.
3. Turn **Use screen saver** off .

Add screen savers

Search for “Screen saver” in Play Store for apps that give you more.

After you install an app, you can select the new ones in **Settings** > **Display** > **Screen saver**.

Open, close, switch apps

Open and close apps

To open an app, tap its icon on the home screen, or swipe up from the bottom of your home screen to open the app tray, then tap the app.

To leave an app and go to your home screen, just swipe up from the bottom of the screen.

You don't need to close apps. Android manages the memory and battery that apps use, so you don't need to worry about leaving apps open.

To close one app, drag up from the bottom of the screen, hold, then let go. In your recent apps, swipe up on the app.

To close all apps, drag up from the bottom of the screen, hold, then let go. In your recent apps, swipe right until you see the start of the list, then tap **Clear all**. (You can prevent certain apps from being cleared.)

Open apps from sidebar

Your phone includes a sidebar that you can swipe open from the edge of your screen to access your favorite apps and actions. You can choose how apps open from the sidebar:

- Open in freeform windows you can drag to reposition around the screen
- Open in full screen

(If you don't see the sidebar, turn it on.)

To open an app, swipe in from the edge of your phone where you see a translucent bar to open a menu of apps, then tap one to open it in a floating, freeform window or full screen.

To open an app in another mode (freeform or full screen), drag it from the sidebar to the center of the screen.

To open an app in a split screen, drag it from the sidebar to the top or bottom of the screen.

To move the freeform app, touch & hold ▬ at the top, then drag.

To resize the freeform app, drag a bottom corner diagonally:

- Drag all the way down to open to full screen.
- Drag all the way up for a floating, movable icon you can tap to reopen the app.

To close the app, tap ✕ in the upper corner.

To customize the sidebar, tap . You can add or remove apps and reorder them.

Switch between open apps

To switch between recently used apps, swipe left or right at the bottom of the screen.

To see your list of recent apps, drag up from the bottom of the screen, hold, then let go:

- To see more apps, swipe left or right.
- To switch to an app, tap it in the list.
- To choose between opening the app in freeform or full screen, touch & hold its icon.

Tip:

Use two apps at once with split screen.

Clear recent apps

You can clear all apps from your list of recent apps. Or, you can prevent an app from being cleared from your recent apps when you tap **Clear all** to close all apps.

To remove all apps from the list:

1. Drag up from the bottom of the screen, hold, then let go to see your list of recent apps.
2. Tap **Clear all**.

To lock an app in the list:

1. Drag up from the bottom of the screen, hold, then let go.
2. On the app you want to keep in the list, tap .

To unlock the app so it's removed when you tap **Clear all**:

1. Drag up from the bottom of the screen, hold, then let go.
2. On the app, tap .

See two apps at the same time

Depending on the app, you can sometimes use more than one app at once. You can also watch a video in a small window while you do other things.

Use two apps at once (freeform)

You can open a second app in a small, freeform window, using the sidebar at the edge of your screen.

Use two apps at once (split screen)

Split the screen

1. Open the first app.
2. Drag up from the bottom of the home screen, hold, then release.
3. In the list of recent apps, tap the app's icon at the top of the preview to see and .

   Be sure to tap the app's **icon** instead of the screen preview, which opens the app.
4. Tap **Split top**.
5. Select the second app to use.

Exit split screen view

Drag the divider line all the way up or down.

See one app while using another (Picture-in-picture)

With some apps, you can watch video in a small, movable frame while you do other things. Use it when navigating with Google Maps, too.

1. When you're playing a video or navigating with Maps, go to the home screen or app you want to use.

   The video (or navigation) shrinks.
2. You can drag the video (or navigation) anywhere on the screen.
   - To make the frame larger, tap it twice.
   - To return it to full size, tap it once, then tap .
   - To close it, drag it to the bottom of the screen. Or, tap it, then tap .

Turn off Picture-in-picture for an app

1. Go to **Settings** > **Apps**.
2. Tap **Special app access** > **Picture-in-picture**.
3. Tap the app.
4. Turn **Allow picture-in-picture** off .

View notifications

Find your notifications

Apps send you notifications to let you know about new messages, calendar events, and alarms.

You can check your notifications from a few places:

- They appear on your lock screen.
- You see them when you swipe the status bar down on any screen.

If you get multiple notifications from an app, they'll be grouped together. You can swipe down to view more details.

Some important notifications will pop up over your current app so you can take action. For example, if you get a call while you're watching a video, a notification will appear so you can answer or ignore the call.

If an app icon has a notification dot, you can touch & hold it to see the most recent notification:

What you can do with lock screen and status bar notifications

Respond from a notification

Many notifications include actions at the bottom that let you complete common tasks without opening the full app. If you have several notifications, these actions are hidden. When you see ⌄, tap it to reveal actions like **Reply**, **Archive**, and more.

Open the app that sent the notification

Swipe down from the top of the screen and tap the notification to open its app.

Instead of opening apps in full screen from notifications, you can set them to open in freeform windows for multi-tasking. Learn more.

From the lock screen, tap the notification twice and enter your PIN, pattern, or password to unlock your screen and open the app.

Snooze a notification

Tap ⌄. Then tap ⏰ and select a duration to snooze notifications. To snooze notifications, first turn on snoozing.

Dismiss a notification

Swipe it sideways. Some notifications, like voicemails, require an action and cannot be dismissed.

Dismiss all notifications

Swipe to the end of your notifications and tap **Clear all**.

Control how and when apps send notifications

Use Do Not Disturb to silence all notifications when you don’t want interruptions.

Touch & hold a notification to customize that app's notifications. Then you can:

- Stop all notifications from that app.
- Change the app's notifications to be **Silent** instead of **Default**.

About preloaded apps

Sometimes, related apps (like apps from Google or from your carrier) are grouped into a folder.

Apps that came with your phone

The following apps may be pre-installed on your phone.

Don’t want some? Delete or disable them. Need other apps? You can download free and paid apps.

Icon	App	Description
	Assistant	Use your voice to control your phone.
	Calculator	Make some quick calculations.
	Calendar	Keep track of your upcoming events, get automatic reminders on your phone, and coordinate with others by sharing calendars.
	Camera	Capture photos or videos.
	Chrome	Browse the web. Access your browser bookmarks from any device, and sync tabs with your computer or Android devices.
	Clock	Set alarms. Use a timer or stopwatch.
	Contacts	Organize and connect with your contacts. Assign ringtones to people.
	Dolby Atmos	Optimize and adjust audio for your phone’s speaker and any connected listening device.
	Drive	Store and synchronize your files on Google's cloud, then access them anywhere you have an internet connection. Create and share spreadsheets, documents, and presentations. Scan documents and share or print them.
	Facebook	Connect with friends, family, and communities. Share updates and media. Find information on events, entertainment, and businesses.

Files	Browse and manage files and folders stored on your device or SD card.
Find Device	Locate and secure a lost phone.
Fit	Track your health and physical activity.
FM Radio	Listen to FM radio stations. Not available in France or Italy.
Gmail	Compose, send, view, or search your email from your phone or computer.
Google	Search the web, see your updates, and adjust Google settings, including privacy.
Google One	Get expanded storage, Google support, and other member benefits with a paid subscription.
Google TV	Get movies and TV shows for instant viewing from Play Store. (Not available in all countries.)
Home	Set up and control your Google Home and Chromecast devices, and other home products like lights, cameras, and thermostats.
Interactive wallpapers	Provides access to Motorola's interactive wallpapers, hosted on the cloud so they don't take up space on your phone until you download them.
Maps	Find your destination, explore locations.
Meet	Make video calls with your friends across Android and iOS.
Messages	Send and receive text messages.

	Motorola Notifications	Subscribe or unsubscribe to communications from Motorola.
	Phone	Make calls.
	Photos	Manage photos and upload them automatically to your private album.
	Play Store	Get apps for your phone, as well as books, magazines, music, and movies and access them from your computer or any Android device.
	Settings	Customize your phone settings.
	Sound Recorder	Record and share audio files.
	Wallet	Securely store payment cards, flight and event tickets, transit passes, vaccination cards, loyalty and gift cards, digital car keys, and campus IDs in this digital wallet.
	YouTube	Find, view, and upload videos to the web.
	YT Music	Stream your favorite albums, singles, and live performances, and get recommendations for new music.

Get help using an app

1. Open the app.
2. Tap ☰ or ⋮.
3. Look for **Help** or **Settings** > **Help**.

Install or update apps

Get apps

You can download more apps, in addition to the apps preloaded on your phone.

Get apps from Google Play Store

To download apps:

1. Open the **Play Store** app.
2. Browse by category or search.
3. Tap an item to see a description, read reviews, and download it.

Tip: To prevent accidental or unwanted purchases, tap your profile icon > **Settings**. To learn more, read Google's help.

Restore Play Store apps

If you uninstalled an app you got from Play Store, you can reinstall it anytime. Have apps you use infrequently, such as a flight tracker? Delete them and easily reinstall when needed.

1. Open the **Play Store** app.
2. Tap your profile icon > **Manage apps & device** > **Manage**.
3. Tap **This device** and change to **Not installed**.
4. Check the box for each app to re-install, then tap .
5. If you have multiple Google accounts, tap your profile icon and next to your account tap . Select the other account and repeat the process to restore apps downloaded in that account.

Get apps from other sources

Before downloading, do some research: check the app's rating and read lots of comments.

To download apps:

1. Open the **Chrome** app and go to the appropriate site to download the app.

   If you see a warning, tap **OK** to continue.

   You'll see in the status bar when the download completes.
2. Tap the download notification to install the app. Or, open the **Files** app to install it later.
3. When installing the app, be sure to review what information the app will access. If you don’t want the app to access this information, cancel the installation. For example, if you're installing an app that makes a shopping list, the app should not require access to your contacts.

Stop adding icons automatically

If you don’t want the app’s icon added to your home screen when you install an app:

1. Touch & hold a blank space on your home screen.
2. Tap **Home settings** > **Home screen style** > **App tray** > .
3. Turn **Add app icons to Home screen** off .

Update apps

Updating your apps gives you the latest features and improves security and stability. For best performance, apps are set to update automatically.

If an app changes the information it wants to access on your phone, you'll get a notification to update the app manually and will be required to review and accept the new permissions.

Update Play Store apps manually

1. Open the **Play Store** app.
2. Tap your profile icon > **Manage apps & device**.
3. Under **Updates available**:
   - Tap **Update all**.
   - Or, to update a specific app, tap **See details**, then tap **Update** by its name.

     To read the summary of what changed, tap the app name before you update it.

Update Play Store apps automatically

To control when your apps are automatically updated:

1. Open the **Play Store** app.
2. Tap your profile icon > **Settings**.
3. Tap **Network preferences** > **Auto-update apps**.
4. Choose whether apps should:
   - Auto-update over any network
   - Auto-update only over Wi-Fi - save data charges on your cellular plan

If you can't update apps

If you see apps waiting to update that are stuck in “Pending” status, update the Chrome app first.

1. On the “Pending downloads” screen, cancel all downloads.
2. Swipe to **Chrome** and tap **Update**.
3. After Chrome has updated, touch **Update all**.

   Apps will now update normally.

Turn off Play Store auto-updates

For best security and performance, keep apps set to update automatically.

Stop a specific app from updating automatically

1. Open the **Play Store** app.
2. Tap your profile icon > **Manage apps & device**.
3. Tap **Manage**, then tap the app's name.
4. Tap and turn off **Enable auto update**.

Stop all apps from updating automatically

1. Open the **Play Store** app.
2. Tap your profile icon > **Settings**.
3. Tap **Network preferences** > **Auto-update apps** > **Don't auto-update apps**.

Manage app permissions

What are permissions?

If an app wants to use specific features and personal information on your phone, it must ask for your permission. You can manage permissions at any time to allow, deny, or modify them.

Features you'll be asked about

If an app wants to access (use, view, change) these features, it must ask you for permission:

- Hardware and system settings, such as access to your camera, microphone, location, contacts, calendar, storage, and sensors
- Network settings, such as permission to access the internet, Wi-Fi, and Bluetooth
- Personal information and accounts, including access to your personal data, accounts, authentication services (for example, email addresses, phone numbers, social media accounts, and more)
- The ability to modify phone settings and perform actions (such as sending notifications or controlling hardware components)

Should you allow or deny access?

Before you give an app permission, it’s important to review what the app’s asking for. Make sure you're okay with what the app wants to do before you say yes.

Android apps can still work even if you don't give them all the permissions they ask for. For instance, an app might not need to know your location or see your contacts to do its thing. But, if you do allow it access, the app might work even better. It's a trade-off. On the one hand, you can limit what info the app knows. On the other hand, you might miss out on cool features.

Respond to app permission requests

You'll see permissions screens:

- The first time you open an app
- The first time you use a specific feature, if that feature requires access
- When an app updates and needs different permissions
- When you restart an app you previously denied permissions

If the screen pops up over another app, tap to allow full access, partial access, or to deny the app access.

If the screen takes you into Settings and flashes a setting:

1. Tap the flashing item.
2. Turn the permission on to accept (or off to deny it).
3. Tap ← or swipe to go back to the previous screen.

Review or change permissions

Review by feature

The first time you use an app, and sometimes when you install or update it, you are asked to grant the app permission to access certain data and phone features. You can adjust these permissions any time.

To adjust permissions by feature:

1. Go to **Settings** > **Privacy**.
2. Tap **Permission manager** tab.
3. Tap a feature to see which apps have permission to use it.
4. Turn that permission on or off for each app as needed.

Review by app

To adjust permissions by app:

1. Touch & hold the app icon, then tap **App info** ⓘ.
2. Tap **Permissions**.
3. Turn each permission on or off as needed.

> **Tip:** To see how the app uses each permission, tap ⋮ > **All permissions**.

Delete or disable apps

Disable apps provided with phone

You can't remove preloaded apps from your phone, but you can disable and hide apps that you don't need.

To disable an app:

1. Go to **Settings** > **Apps**.
2. Tap **All apps** > app you want to disable.
3. Tap **Disable**.

To re-enable a disabled app:

1. Go to **Settings** > **Apps** > **All apps**.
2. Tap the app.
3. Tap **Enable**.

You can remove any app from your homescreen.

Delete apps you installed

You can delete (uninstall) apps that you downloaded. For many preloaded apps, you can disable but not delete them.

1. Touch & hold the app's icon.
2. Do one of the following:
   - Drag the icon up and drop it on . This deletes the app and frees storage space.
   - If you don't see a delete option, touch & hold the app icon, then tap > **Disable**.

Delete apps installed by others

If you are the owner of the phone and shared it with users or guests, you can uninstall apps they installed. Although their apps don’t appear in your app tray or on your home screen, they do reduce available storage space.

1. Go to **Settings** > **Apps** > **All apps**.

   Apps installed by others show the message **Not installed for this user**.
2. Tap the app name.
3. Tap > **Uninstall for all users**.

Find problem apps with safe mode

Issues such as apps crashing, unexpected reboots, or fast battery drain could be caused by an app you installed. Use safe mode to start your phone with only the original software and apps. If the issues go away in safe mode, the problem is probably from an app you downloaded.

Step 1: Restart in safe mode

1. Do one of the following:
   - Press & hold the Power and Volume up buttons at the same time.
   - Swipe down from the top of any screen and tap .
2. Touch & hold **Power off**. Then tap **OK** to restart in safe mode.

   When it restarts, you'll see **Safe mode** across the bottom of the home screen, and all widgets and third-party apps will be disabled.

Step 2: Check if the problem goes away

Use your phone and see if the problem has gone away. Remember, you won't be able to use any downloaded apps.

If the problem goes away, an app is probably causing your problem, so you should exit safe mode and check your apps.

If the problem doesn't go away, an app's not the cause. Try these performance troubleshooting steps next.

Step 3: Exit safe mode

Press & hold the Power + Volume up buttons simultaneously, then touch **Restart** .

Or, hold the Power button for about 30 seconds, or until your phone restarts.

Step 4: Check your apps

1. One by one, delete recently downloaded apps.

   Keep a list of the apps as you go.
2. After you delete each app, restart your phone.

   See whether removing that app solved the problem.
3. Once you've found and deleted the problematic app, you can restore the other apps you removed during testing.

Protect against harmful apps

Scan phone for harmful apps

Play Protect helps keep your phone secure by automatically scanning your apps, including sideloaded apps, to check for potentially harmful apps (malware).

If Play Protect finds a potentially harmful app, it stops the app from running and warns you so that you can uninstall it.

To see the results or to rescan:

1. Open the **Play Store** app.
2. Tap your profile icon M > **Play Protect**.
3. Review the results of the latest scan, or tap **Scan**.

Play Protect is on by default.

To learn more, read Google's help.

If your phone seems slow

If you've scanned your phone to confirm there aren't any potentially harmful apps but your phone seems slow, troubleshoot the issue.

Search the web

Search from anywhere

You don't have to leave your current app to search for the info you need. Use Google Assistant from any screen to get search results and options for your next action.

To search:

1. Say “OK, Google” or “Hey, Google”. (Be sure you've set up the launch phrase.)

   Or swipe diagonally from either lower corner of the screen.

2. Tell the assistant what you're looking for. For example, search for a local restaurant by saying “Find [restaurant name].”
3. Below the search result, tap options for related actions: make a call, get directions, read reviews, and more.

For more help with Google Assistant, read Google's support information.

Search with the Google search bar

Type search terms

1. Tap the blank space on the search bar.
2. Start typing a search term.

   As you type, suggested terms appear.
3. Tap a suggestion to search for it.

Use voice search

Tap to call Assistant. Learn more.

Use camera to search for info

Tap , then follow onscreen instructions.

Use camera to search for info

You can use Google Lens with your camera to:

- **Search for information about objects and surroundings:** Learn about products, landmarks and buildings, plants and animals, books and visual art
- **Scan barcodes and QR codes:** Search for related information, open a website to purchase a product
- **Digitize real-world text:** Copy text to paste in another app, translate text, save business card information to Contacts, create calendar events from dates on posters or billboards

To use Google Lens:

1. On the home screen, tap on the search widget.

   Or, open the Camera app and tap on the viewfinder.

2. Frame the item you want to learn about and tap .

3. Tap the item you want to learn about.

   For text, tap it to select it, and use to select more.

4. In the list of results:

   - Review results, then tap a selection to view it or take the suggested action.
   - To crop the area of your search for more accurate results, adjust the frame corners.

You can also use Google Lens on captured photos and screenshots. In the Photos app, open the photo or screenshot, then tap .

To learn more, read Google's help.

Delete Google search history

To learn how, read Google's help.

Use search engine other than Google

To use a search engine other than Google:

1. Search for “search engine” in Play Store and install one of the apps.
2. Open that app to search.
3. Optionally:

   - Delete the Google search widget from your home screen. If you can’t delete it, use a different launcher for your home screen that doesn’t include the widget.
   - Install a browser to replace Chrome and make it your default browser.
   - Turn off Google’s collection of your information.

Search your phone

Find an app

1. Swipe up from the bottom of the home screen.
2. Tap **Search apps**.
3. Type the app's name.
4. If the app is on your phone, tap its icon to open it.

   If the app isn't on your phone, tap **SEARCH FOR MORE APPS** to go to Play Store and install with one tap.

Find a setting

1. Go to **Settings**.
2. At the top of Settings, tap .
3. Type your search term and tap on the keyboard.
4. In the list of search results, tap a setting to open it.

Find your phone number

1. Go to **Settings**.
2. Tap **About phone** > **Phone number**.

Find photos, videos, files

To find photos or videos on your phone, use the Photos app.

To find downloaded files, use the Files app.

Browse websites

Your phone connects to your carrier's cellular network or to a Wi-Fi network to access the internet. To save data charges on your cellular plan, use a Wi-Fi connection.

Browse with Chrome

Visit and bookmark websites

1. Open the **Chrome** app.
2. Go to a site by tapping the bar at the top and typing the address.
3. On a web page:
   - To bookmark it, tap > ☆.

     Or, tap > **Add to Home screen** to put a shortcut on your home screen.
   - To search for text on that page, tap > **Find in page**.
   - To open a link, tap it.
   - To see options for opening a link in a new tab and copying or sharing a link, touch & hold the link.
   - To print the page, tap > **Share** > **Print**. If you don't see your printer listed, set up your print service.
4. To return to the previous page tap ◀.

To learn more about browsing or managing bookmarks, read Google's help.

Open and switch tabs

In the **Chrome** app:

- To switch tabs, tap the switcher icon 3.
- To open a new tab, tap the switcher icon 3, then tap +.

Clear browsing history

1. Open the **Chrome** app.
2. Tap > **History**.
3. Tap **Clear browsing data**.

   To learn more, read Google's help.

You can also review and delete your search history.

Change default browser

You can download other browsers from Play Store. After you've installed one, you can make it your default browser.

1. Go to **Settings** > **Apps**.
2. Tap **Default apps** > **Browser app**.
3. Tap the app to use.

About text and multimedia messages

Text messages - SMS

SMS (Short Message Service) messages are text only. You can send a message up to 160 characters long. If you type more than that, your message will be sent in a series of SMS messages.

You can send one SMS to multiple people, and the replies will come in separate threads (unless you and your recipients have group messaging enabled).

SMS messages are included in most carriers' text messaging plans and don't use cellular data.

Multimedia messages - MMS

MMS (Multimedia Messaging Service) messages can include unlimited text and a photo, picture slideshow, video, or sound file.

You can send one MMS message to multiple people at once using group messaging, and replies will be delivered in group conversation threads to each person in the group.

MMS messages use cellular data, so you need a cellular data plan or pay-per-use payment to send them.

Group messaging

With group messaging, you can have a conversation with multiple people at once. All replies from recipients are delivered to all recipients, in a group conversation thread.

Even though you send one message to multiple people, you'll be charged for each message received. Group messaging:

- Converts multiple-recipient SMS messages to MMS for everyone who can receive them
- Is available for MMS messages only

Note: Recipients who can't get MMS messages will receive an SMS instead. If there's media attached, they'll get a link to download it over Wi-Fi (if offered by their carrier). Replies are to the sender only, in an individual conversation.

If you don't want to receive replies in group chats, you can turn off group messaging in the Messages app.

Read, send messages

Work with messages

With the Messages app, you can send and receive text messages.

Read and reply to a message

When you receive a text message with the Messages app, you'll see in the status bar.

1. Swipe the status bar down and tap .
2. To respond, type in the text box and tap .
3. Optionally:
   - To open an attached photo or file, tap it.
   - To save an attachment, touch & hold it, then tap > **Save**.
   - If the message is important, star it so you can find it later.
   - If the message is from an unassigned number, create a contact to associate a name with that number.

Tips for incoming messages:

- You can control message notifications, changing the sound or turning them on/off.
- If you don't want multi-recipient SMS messages converted to MMS and want replies sent in separate conversations (threads) to you only, turn off group messaging.
- To protect your privacy, you can hide sensitive content for lock screen notifications.

Send a message

1. Open the **Messages** app.
2. Tap .
3. Enter recipients, then type the message.
4. Optionally:
   - To add an attachment, tap or .
   - To add a smiley or other icons, tap on the onscreen keyboard.
   - If you're using two SIMs and want to switch to the other to send the text, tap and select the SIM.
5. Tap .

Tips for sending messages:

- To text your best friend with one tap from your home screen, add a task shortcut. Touch & hold and drag to your home screen.

- To change the text message reply to incoming calls, open the Phone app and tap > **Settings** > **Quick responses**.

Manage drafts

When you begin composing a text message reply or a new message with recipients, it's saved in your message list as a draft until you send or delete it.

1. Open the message list and tap the conversation marked **Draft**.
2. Do one:
   - Finish composing the message and tap .
   - Delete the characters in the text field to delete the draft.

Forward a message

1. Open the conversation in **Messages**.
2. Touch & hold the message.
3. Tap > **Forward**.

Copy text from a message

1. Open the conversation in **Messages**.
2. Touch & hold the message.
3. Tap .

You can now paste it elsewhere, like in a different text or in an email you're composing.

Work with attachments

Your text messages can include photos, voice messages, and video as attachments.

Add attachment

1. In the **Messages** app, compose a reply or a new message.
2. Do one of the following:
   - Touch & hold to start recording a voice message. When done, lift your finger.
   - Tap to attach a photo or video or capture a new one. Tap to expand the viewfinder to fullscreen, where you can switch to a selfie camera or capture a video.
   - Tap for other types of attachments (emoji, GIF, your location, contacts).
3. Tap .

If you're having trouble attaching files, check that:

- Cellular data is turned on.
- Your data plan supports MMS (multimedia messages).

Save attachment you received

In the message, touch & hold the attachment, then tap > **Save**. Or, tap the attachment to open it and look for save options.

If you don't save an attached photo or video, it is kept within the message only. So, if you delete the message, you also delete the attachment. (You can try to recover recently deleted messages.)

View saved attachments

For photos or videos, open the Photos app and tap **Collections**.

For other attachments, open the Files app.

Manage, delete messages

Keep track of important messages

To access your important messages and conversations in the Messages app:

Pin up to 3 conversations to keep these groups of messages at the top when you open the app.

Star messages you want to find later.

Pin/unpin conversations

To pin a conversation:

1. Open the Messages app.
2. In your conversation list, touch & hold the conversation.
3. Tap .

To unpin a conversation, touch & hold it, then tap .

Star messages

1. Open the conversation that has the message you want to star.
2. Touch & hold the message.
3. Tap .

To remove a star, on the message, tap .

Find starred messages

To find starred messages across all conversations, go to the top of your conversation list and tap > **Starred**.

To find starred messages within a specific conversation, open the conversation and tap > **Starred**.

Delete or archive texts

When you delete a message, you also delete any attached photos or videos. If you want the attachments, be sure to save them before deleting the message.

- To delete a single message, open the conversation (thread) and touch & hold the message, then touch .
- To delete or archive all messages in a conversation, touch & hold the conversation, then touch to delete or to archive.
- To delete or archive multiple conversations, touch & hold the first conversation, then touch the other conversations to select them, and touch or .
- To see archived messages, tap your profile icon > **Archived**.

Control notifications for text messages

Follow the instructions below to change all notifications from your messaging app. But, if you want to stop text message notifications only during certain hours or from specific people, use Do Not Disturb instead.

If you use the Messages app

1. Open the **Messages** app.
2. Touch your profile icon > **Messages settings**.
3. If you have dual SIMs, touch **General**.
4. Touch **Notifications** and:
   - Turn notifications on or off
   - Change the sound
   - Add or remove vibration

If you use a different messaging app

1. Touch & hold the app's icon.
2. Touch **App info** > **Notifications**.
3. Make changes.

Request text delivery reports

See whether recipients receive your messages by requesting delivery reports.

1. Open the **Messages** app.
2. Touch your profile icon > **Messages settings**
3. If you have dual SIMs, touch the SIM.

   If you have one SIM, touch **Advanced**.
4. Turn on **Get SMS delivery reports**.

Turn group messaging on or off

Group messaging allows conversation participants to reply to all recipients in a single thread. If you do not want multi-recipient SMS messages converted to MMS and want replies sent in separate threads only to you, turn off group messaging.

This feature is not available in all countries.

To adjust the group messaging setting:

1. In the Messages app, touch your profile icon > **Messages settings**.
2. If you have dual SIMs, touch the SIM.

   If you have one SIM, touch **Advanced**.
3. Touch **Group messaging** and select an option.

Change default messaging app

You can download additional messaging apps from Play Store. After you've installed one, you can make it your default messaging app.

To select a different app to send and receive text (SMS) and multimedia (MMS) messages:

1. Go to **Settings** > **Apps**.
2. Touch **Default apps** > **SMS app**.
3. Touch the app to use.

Change text message reply to incoming calls

When your phone rings, you can drag towards to see a list of quick responses you can send by text message instead of answering the call.

To edit these quick responses:

1. Touch .
2. Touch > **Settings**.
3. Touch **Quick responses**.
4. Touch one of the responses to edit it.

Get text messages on your computer

Set up Device Pairing

If you use the Messages app on your phone, you can see and send text messages on your computer.

Pair your computer and the Messages app on your phone by scanning a QR code:

- The QR code is unique to that computer.
- You can set up multiple computers, getting individual QR codes, but only one is active at a time.

To set up a computer:

1. Be sure your phone and computer are connected to the internet.
2. On your phone, open the **Messages** app, then tap your profile icon > **Device Pairing**.
3. On your computer, go to https://messages.google.com/web.
4. Follow onscreen instructions to scan the QR code on the web page with your phone.

   Once paired, you'll see your latest conversations in your computer's browser.

See and send messages

When you have unread messages, you'll see a red notification and number of unread messages in the browser tab on your computer.

To send messages from your computer, your phone must be on and connected to the internet.

Usual carrier fees for sending text messages from your phone also apply to messages sent from your computer.

Sign out of Device Pairing

If you don’t use Messages on a paired computer for 14 days, you’re automatically signed out from that computer for security reasons.

If you're using a shared or public computer, sign out when you're done.

To sign out from your phone:

1. Open the **Messages** app.
2. Tap your profile icon > **Device Pairing**.
3. Do one of the following:
   - Tap ✕ next to an individual computer to sign out of it.
   - Tap **Unpair all devices**.

To sign out from the computer, at the top of the message list, click > **Unpair**.

Read, send, manage emails

Read email

If you've set up email, you'll start receiving emails after your account syncs with your phone. When you receive an email notification, you'll see in the status bar.

1. To open email from a notification, swipe the status bar down and touch the notification:
   - A single email notification opens the message directly.
   - A multiple email notification opens the email list; touch an email to open it.

   If you dismiss the notification and want to view the email later, open the **Gmail** app.
2. Do any of the following:
   - To view other folders, touch from your email list.
   - Attachments appear at the end of the email. You can view or save them.
   - You can print emails from your phone.

Reply to or forward an email

1. Touch to reply to the sender. Or, swipe to the end of the email and touch to reply to all recipients or to forward.
2. Enter your message.
3. To copy someone on the email, in the To field, touch .
4. Touch .

Send new email

1. Open the **Gmail** app and touch **Compose**.

   Or, touch & hold , then touch **Compose**. (If you send lots of emails, add a task shortcut. Drag **Compose** to your home screen.)
2. Enter the recipient and your message.
3. To copy someone on the email, in the To field, touch .
4. Touch .

Add attachment to email

1. In the email you're composing, tap > **Attach file** to add a file stored on your phone, or attach one saved on Drive.
2. Browse to the file, and tap it to add it to the email. The attachment appears at the bottom of the email.

Find emails

When you open the Gmail app, you see your Inbox.

To view sent email, drafts, recently deleted email, and other categories, touch ☰.

To search for emails, at the top of your email list enter terms, like the topic or the sender's name.

Delete emails

To delete an open email, tap 🗑.

To delete an open draft of an email, tap ⋮ > **Discard**.

To delete multiple emails, go to your email list, touch & hold the first message, then touch the other messages to select them, and tap 🗑.

To delete large quantities of email, sign into your email account on your computer, and see your email provider's help for more information.

Tips:

- To delete attachments that you saved from emails, use the Files app.
- You can also remove email accounts from your phone.

Learn more

For more help with Gmail, read Google's support information.

For help managing email from other providers, sign into your email account on your computer and look for the provider's instructions.

View email attachments

View attachments

Attachments appear at the end of an email.

To view or play the attachment, tap it.

If you see a message that you can't open the attachment type, most file types have a free viewer that you can use. In Play Store, search for the file type, then select and download an app.

Save attachments from email

In the email, tap on the attachment to download and save it on your phone, or tap to save it in Drive.

To view attachments later, open the **Files** app (go to Download) or the **Drive** app.

Delete attachments saved from email

1. Open the **Files** app.
2. Tap **Downloads**.
3. Do one of the following:
   - To select one item, touch & hold it.
   - To select multiple items, touch & hold the first one, then tap the others.
4. Tap .

Prevent previews of attachments

Attached photos or videos appear as thumbnails, showing a preview.

To see a generic thumbnail instead of a preview thumbnail until you open the file:

1. Open the **Gmail** app.
2. Tap > **Settings**, then tap the account name.
3. Tap **Images** > **Ask before displaying external images**.

Preview inboxes from home screen

To preview your inboxes, open emails, or quickly start a new email, add the Gmail widget to your home screen.

With the widget, you can:

- **Open a message.** Touch the message.
- **Compose a message.** Touch .
- **View more messages.** Scroll down the list.
- **Open the app.** Touch the folder name at the top of the widget.

Add email signature

To add a signature automatically to the end of emails you send:

1. Open the **Gmail** app.
2. Touch ☰ > **Settings**.
3. Select the account.
4. Touch **Mobile Signature** and edit the text you want to appear at the end of every email.

Control email notifications

You can control whether you see notifications when you receive an email.

1. Touch & hold .
2. Touch > **Notifications**.
3. Adjust notification settings.

Tip: To automatically silence notifications during hours you specify, use Do Not Disturb.

About the calendar

Keep track of upcoming events and get automatic reminders on your phone with your calendar. Google calendars let you save all your events in one place, which is secure, synced, and accessible from any web-enabled device or computer when you've signed in to your account.

You can:

- Review existing events.
- Create new events.
- Control notifications for events.

Your calendar can automatically create new events based on your incoming Gmail messages. For example, if you make restaurant reservations or book a flight, these events will show up automatically on your calendar; you don't have to add them.

If you created multiple calendars within your Google account, or if you have multiple Google accounts on your phone, you can control which events are synced with your phone.

Find calendar events

Open calendar events

You'll see 31 in the status bar to alert you of upcoming events. Just swipe the status bar down and touch the notification to see the event details in your calendar.

To see your list of upcoming events, open the Calendar app.

Tip: For an overview of your upcoming events from your home screen, add a Calendar widget.

Get around the calendar

To glance at the month view:

1. Touch the month's name.
2. Touch a date to jump to it and see its events.

To change the view:

1. In your calendar, touch ≡.
2. Touch **Schedule**, **Day**, **3 days**, **Week** or **Month**. This view remains the default until you change it.

From these views, you can:

- **Read or edit event details.** Touch the event to open it and touch ✎ to edit it.
- **Add new events.** Touch +.
- **Search your calendar.** Touch 🔍.

Create and manage events

Create calendar events

As you're creating an event, you'll see suggestions for the event titles, locations, people, and more. In some cases, these suggestions are personalized based on information associated with your Google account and your previously created events.

1. Open the **Calendar** app and touch + > **Event**.
2. If you have multiple accounts, touch the account for the calendar you want.
3. Enter the start time and other details.
4. If you want a reminder sent to your status bar, touch **Add notification** and select how long before the event you want a reminder.
5. Touch **Save**.

Edit or delete calendar events

1. Touch an event to open it.
2. Do any of the following:
   - To edit it, touch ✎.
   - To delete it, touch ⋮ > **Delete**.

Control which events are shown

To temporarily hide calendar events for a Google account you don't need to see all the time:

1. Open the **Calendar** app and tap ☰.
2. Beneath the account name, tap **Events** to remove the checkbox. If you have multiple calendars for that account, ap the name of each calendar to hide its events.

> **Tip:** When you hide events, the calendar still syncs with your Google account. To prevent that account's calendar from automatically syncing, from the home screen go to **Settings** > **Passwords & accounts**.

To exclude automatically-generated events created from Gmail (for events such as flight bookings and restaurant reservations):

1. Open the **Calendar** app.
2. Tap ☰ > **Settings** > **Events from Gmail**.
3. Under the name of the account, turn **Show events from Gmail** off ⬭.

To learn more, open Calendar and touch ☰ > **Help & Feedback**.

Control notifications for calendar events

1. Touch & hold the app icon.
2. Tap > **Notifications**.
3. Adjust notification settings.

If you have assigned a ringtone for the notification but you silence your phone, your phone won't play the ringtone.

Tip: To automatically silence notifications during hours you specify, use Do Not Disturb.

Set alarms

Set alarm by touch

1. Open quick settings by swiping down twice, then swipe right and touch .
2. Adjust alarms:
   - To create a new alarm, touch .
   - To use an existing alarm, switch it on.
   - To change an alarm's sound, schedule or label, touch .
3. To control general alarm settings, like alarm volume and snooze duration, touch > **Settings**.

Tip: Your phone must be powered on for the alarm to activate.

Set alarm by voice

1. If you've set up Voice Match, say “Hey Google”. Or, touch on the Google Search widget.

2. When prompted to speak, say your command. For example: “Set alarm for 7:45 p.m., label, switch the laundry” or “Wake me up at 7 a.m. tomorrow.”

   Your phone sets the alarm and provides a confirmation.

When an alarm is set

You'll see in the status bar.

To adjust it, open quick settings by swiping down twice, then swipe right and touch .

Delete an alarm

1. Open the **Clock** app.
2. Touch
3. Touch > .

Use timer or stopwatch

Use timers

You can set multiple countdown timers with labels to keep track:

1. In the Clock app, touch for the Timer tab.
2. Enter the time to count down.
3. Touch .
4. Do any of the following:
   - To pause the countdown, touch .
   - To add a label to the timer, touch the current name and change it (helpful when using multiple timers).
   - To add a minute to the countdown, touch **+ 1:00**.
   - To reset the counter to the original time, touch .
   - To add a timer, touch .
   - To delete a timer, touch .
   - To change the timer's sound, touch > **Settings** > **Timer sound**.
   - If you leave this app, quickly return to it by swiping the status bar down with one finger to see the timer notification and remaining time. To open the timer, touch the notification.

Tip: If you use timers frequently, add a task shortcut. Touch & hold , then drag **Create new timer** to your home screen.

Use a stopwatch

Record your time.

1. In the Clock app, touch for the Stopwatch tab.
2. Touch .
3. Do any of the following:
   - To pause the stopwatch, touch .
   - To record laps (or multiple durations) while the stopwatch is running, touch .
   - To reset the counter to zero, touch .
   - If you leave this app, quickly return to it by swiping the status bar down with one finger and touching a control. To open the stopwatch, touch the notification.

Tip: If you use stopwatches frequently, add a task shortcut. Touch & hold , then drag **Start stopwatch** to your home screen.

Set date and time

Change time format

1. Go to **Settings** > **System** > **Date & time**.
2. To change how times are displayed:
   - To use military time such as 13:00, turn **Use locale default** off and turn **Use 24-hour format** on .
   - To use the time format of your current location, turn **Use locale default** on .
   - To use 12-hour format, turn both **Use locale default** and **Use 24-hour format** off .

Set date and time automatically

1. Go to **Settings** > **System** > **Date & time**.
2. Turn **Set time automatically** and **Use location** on .

Your phone automatically syncs with the local time (using the mobile network). The local time is used for alarms and is displayed on the lock screen and other displays.

Set date and time manually

1. Go to **Settings** > **System** > **Date & time**.
2. Turn **Set time automatically** off .
3. To make corrections, tap **Date** and **Time**.

Switch time zones

1. Go to **Settings** > **System** > **Date & time**.
2. Turn **Set automatically** off .
3. Tap **Time zone**.
4. Choose a regional time zone (which is applied to the current time).

Show multiple time zones

You can view multiple time zones in the Clock app, so you can coordinate plans with friends and co-workers in other cities, or stay in touch with family back home when you're traveling.

1. Open the **Clock** app and tap .
2. To add time zones, tap , then select cities in the time zone you want to view.

Show home time zone

When traveling, you can view your home time zone in the Clock app.

1. Open the **Clock** app and tap .
2. Tap > **Settings**.
3. Turn **Automatic home clock** on .

Add contacts

Add contacts automatically

When you add an account to your phone, the contacts for that account are available on your phone automatically.

Add contact with Contacts app

1. Open the **Contacts** app.
2. Tap .
3. If you're using more than one account, the account that will be synced with your new contact appears at the top. To change accounts, tap .
4. Tap a text box to type the name and details. Fill in as much or as little information as you'd like.

   Tips:

   - Tap to add a photo. Choose a photo you've saved, or take a photo and crop it.
   - You can assign a custom ringtone for calls from that contact.
   - If you have multiple accounts on your phone and want to change the default account for new contacts, in the Contacts app tap your profile icon > > **Default account for new contacts**.
5. Tap **Save**.

Add contact from text message

You can easily create a new contact or add a new number for an existing contact when you receive a text message from an unassigned number.

1. Open the **Messages** app.
2. In the message list, touch & hold the number, then tap > **Add contact**.
3. Tap .
4. Do one of the following:
   - To add to an existing contact, start typing the contact's name in the search field, then select it.
   - To set up a new contact, tap **Create a new contact** and add contact details.
5. Tap or **Save**.

Other ways to add contacts

- Save a recent call as a contact.
- Have someone send you a name card.

Edit or delete contacts

Edit contacts

After creating a contact, you can change the name, photo, and other contact information.

1. Open the **Contacts** app.
2. Touch the person's name.
3. Adjust settings as needed:
   - To assign a custom ringtone, touch > **Set ringtone**.
   - To edit contact info, touch , then touch a field to make changes, touch to change the photo, or touch > **Discard** to undo changes.

Merge contacts

If you have two contacts for the same person, you can merge the information (including all emails and phone numbers) into a single listing.

Automatically merge contacts

1. Open the **Contacts** app.
2. Tap **Organize** > **Merge & fix**.
3. Tap **Merge duplicates**.

   If you don’t see this option, contacts can't be automatically merged.
4. Select options to merge one or all duplicates.

Delete contacts

You can delete contacts created and stored on your phone. If the contact is synced from a social network account, you need to delete the contact in that account. For example, a Facebook contact must be deleted from within your Facebook account. Or, hide Facebook contacts on your phone by filtering your contact list.

Delete one contact

1. Open the **Contacts** app.
2. Touch the person's name.
3. Touch > **Delete** and confirm the deletion.

Delete multiple contacts

1. Open the **Contacts** app.
2. In your contact list, touch & hold the first contact.
3. Touch the other contacts to delete.

4. Touch .

Star your favorite contacts

Contacts you mark as favorites appear at the top of the list in the Contacts app and on the tab in the Phone app.

To add someone to your favorites:

1. Touch the contact icon (photo or other icon).
2. Touch .

Sort contacts

Sort contacts in Contacts app

1. Open the **Contacts** app.
2. Touch your profile icon > .
3. Set options:
   - To sort by first or last name, touch **Sort by**.
   - To list names with first name first or last name first, touch **Name format**.

Sort contacts in Phone app

1. Open the **Phone** app.
2. Touch > **Settings** > **Display options**.
3. Set options:
   - To sort by first or last name, touch **Sort by**.
   - To list names with first name first or last name first, touch **Name format**.

Narrow which contacts are shown

In the Contacts app, you can choose which contacts to show. These changes won't affect the contacts that show up in the Phone app.

In the **Contacts** app:

- To show contacts from only one account or all accounts, touch your profile icon , then select the account(s).
- To narrow which contacts are shown from your account, touch > **Customize view**.

In the **Phone** app, use the tab to see only contacts you call frequently or have starred as favorites.

To remove contacts from this tab, touch & hold the contact, then touch .

Share contacts

Ways to share contacts

You can share one or all contacts by sending a name card file (.vcf).

You can also share a contact's information as a text message attachment.

Or, just touch your phones together and beam the contact information with NFC.

Share one or a few contacts

1. Open the **Contacts** app.
2. Touch & hold a name to select it, then touch others to select more.
3. Touch .
4. Select the way to share.

Receive a name card file

1. When someone sends you a name card file, you'll see a file transfer notification. Tap the notification and accept the file transfer.
2. Tap the name card file (.vcf) to open it and add the person to your contacts.

Answer calls

Answer incoming call

When you receive a phone call, the Incoming call screen shows the caller ID. If you miss a call, you'll see in the status bar.

To answer an incoming call:

- On the Incoming call screen, touch **Answer**.
- On the lock screen, swipe up to answer a voice call, or swipe the caller's icon/picture up to answer a video call.

During a call, you can use the keypad to enter numbers or codes, use speakerphone or a paired Bluetooth device, and add other people to the call. Learn more.

Tip: You can save a recent call as a contact.

Auto answer on headset

Not all carriers support this feature.

You can set your phone to automatically answer calls after 2, 5, or 10 seconds when you're using a headset (wired or Bluetooth).

1. Touch .
2. Touch > **Settings**.
3. Do one of the following:
   - If your phone has one SIM card, touch **Calls**.
   - If your phone has dual SIMs, touch **Calling accounts** and select the SIM.
4. Touch **Auto answer on headset** and select a duration.

Dismiss incoming call

If you don’t want to talk to the caller, you can:

- **Divert the call to voicemail.** On the Incoming call screen, touch **Decline**. Or, on the lock screen, press the Power button. You can also automatically divert all calls from a specified number to voicemail.
- **Respond with a text message.** On the lock screen, touch . You can customize these default messages.
- **Block all calls from that number.**

Control ringtones and notifications

You can:

- **Quickly silence the ringer.** Press Volume Down on the side of the phone.

- **Silence ringtones during hours you specify.** Use Do Not Disturb.
- **Choose a unique ringtone for specific people.** You'll know instantly who's calling.
- **Get notified of incoming calls when you're on a call.** Set up call waiting.
- **Set the number of rings before sending a call to voicemail.** Dial into voicemail, then follow your carrier's prompts to change this setting.

Fix an issue

If your phone isn't ringing for incoming calls, look for ⛔ in your status bar. Open quick settings and turn ⛔ Do Not Disturb off. Your phone will ring for incoming calls. Check your settings to make sure your phone is screening calls at the appropriate times.

If you're having other issues, try these troubleshooting steps.

Make calls

Make a call

1. Touch .
2. Touch and enter a number.
3. If you enter a wrong number, touch .
4. Touch to call the number.
5. To hang up, touch .

Other ways to make calls

You can place calls from:

- The Phone app
- The Contacts app
- The Assistant app
- Other apps that show contact information. Wherever you see a phone number, you can usually touch it to dial.

Return a recent call

In the Phone app, touch , then touch next to the number.

Tip: You can save a recent call as a contact.

Dial a favorite contact

In the Phone app, touch to see your favorites, then touch the contact.

In the Contacts app, at the top of the list under , touch the contact.

Dial by contact lookup

1. Open the Phone app and touch .

   Or, open the Contacts app.
2. In the search field, start typing the name to select from matches.
3. Touch the contact name, then touch next to the number to call.

Tip: To call frequent numbers with one touch from your home screen, add a Direct dial widget.

Dial by voice

Get your assistant's attention, then say “Call” or “Dial” and one of the following:

- Phone number
- Contact's name
- Name and town of local business

Change default calling app

You can download additional calling apps from Play Store. After you've installed one, you can make it your default calling app.

1. Go to **Settings** > **Apps**.
2. Touch **Default apps** > **Phone app**.
3. Touch the app to use.

Fix an issue

If you can't make calls, try these troubleshooting steps.

During a call

Adjust sound during call

While listening, you can:

- **Adjust the volume.** Use the Volume button on the side of the phone.
- **Switch between earpiece, loudspeaker, or connected Bluetooth device.** Touch .
- **Use a paired Bluetooth device.** Touch to use or stop using the device.
- **Mute your microphone.** Touch . You can hear the caller but they can't hear you.

Enter a number

Touch on the call screen to use the numeric keypad.

Use other apps

When you put your phone up to your ear, the screen turns off to prevent you from accidentally touching it. To turn it back on, move it away from your ear or press the Power button.

To hide the call and use other apps, swipe up from the bottom of the screen.

To return to the call, swipe the status bar down and touch **Ongoing call**.

Answer call waiting

If call waiting is active and a new call comes in, you can answer it. Touch **Hold and Answer Voice**. The first call is put on hold.

To switch between calls, touch .

To merge the calls, touch .

Record calls

Not all carriers and countries support this feature.

To record an incoming or outgoing call:

- On the call screen, touch to start and to stop.
- You can't start recording when you're on mute, on hold, or on conference calls.
- When you start recording a call, for legal purposes, a voice announces the call is being recorded. You can't turn off the announcement.

To play or share the recording:

1. In the Phone app, touch .
2. In the list of recent calls, means the call was recorded. Touch the call.

3. Then:
    - Touch to play the recording.
    - Touch to share it.
    - To delete it, swipe the recording left.

Recording a conversation without the consent of the other party is illegal in most countries. Know your country's laws before recording a call.

End the call

Tap on the call screen. Or:

- From the conversation bubble, tap **End call**.
- From the notification, tap **Hang up**.

Make video calls

Make video call with Meet app

Meet lets you video call anyone in your contact list who also uses Meet. Android users can get it from Play Store, and iPhone users can download it from the App Store. The video calls are secure and can't be seen by others.

To get started, open the Meet app and follow the onscreen instructions to set it up. For more information, tap ⋮ > **Help & Feedback**.

Get an app to make video calls

There are many video calling apps to choose from on Play Store (like WhatsApp, Skype, and more).

1. Open the **Play Store** app.
2. Search for "video calls".
3. Download the app you want to use.

Make conference calls

To make a conference call:

1. Call the first person.
2. To call the next person:
   a. Touch .

      This puts the first call on hold.

   b. Enter the number.
   c. Touch .
3. To join the calls after the second person answers, touch .

Make calls over Wi-Fi

About Wi-Fi calling

Some carriers support Wi-Fi calling to make and receive calls and text messages from locations where your cellular signal is poor or not available. Contact your carrier to confirm that they support Wi-Fi calling for your phone.

Calls and texts that are made over a Wi-Fi network use your existing cellular rate plan, even when roaming:

- Calls and texts to numbers in your home country are charged the same as your regular cellular calls.
- Calls and texts to international numbers are charged at international rates.

When connected to a Wi-Fi network, your phone automatically switches between cellular and Wi-Fi networks for calls and texts based on the signal strengths.

Turn Wi-Fi calling on or off

If your carrier supports Wi-Fi calling, you need to turn it on.

1. Go to **Settings** > **Network & internet** > **Mobile network**.
2. If you're using two SIMs, tap the SIM name.
3. Tap **Wi-Fi calling**.

   Depending on your carrier, the **Wi-Fi calling** setting may be in your Phone app at > **Settings** > **Calling accounts** > your SIM > **Wi-Fi calling**.

   If you don’t see this option, your carrier doesn’t support this feature.
4. Turn it on or off.

You can also open quick settings to turn Wi-Fi calling on or off.

Make Wi-Fi call

1. Make sure that:
   - Wi-Fi calling is on.
   - You're connected to a Wi-Fi network.
2. Make the call as usual.

Depending on your carrier, you’ll see a Wi-Fi calling icon in the status bar, start and end call buttons, or the active call status indicator when your call is over a Wi-Fi network.

If you're not connected to Wi-Fi, calls use your carrier’s mobile network.

If Wi-Fi calling isn’t working

If you're outside your carrier's network and want to use Wi-Fi calling instead of roaming on another carrier’s network:

1. Go to **Settings** > **Network & internet** > **Mobile network**.

2. If your phone has dual SIMs, tap the SIM set up for Wi-Fi calling.
3. Tap **Wi-Fi calling**.
4. Tap **When Roaming** and choose **Prefer Wi-Fi**.

Other reasons why Wi-Fi calling may not work:

- If you're in airplane mode, a Wi-Fi call will drop when you lose your Wi-Fi connection.
- When traveling internationally, some carriers require turning on Wi-Fi calling before leaving your home country.
- Some countries don't allow Wi-Fi calling, and some carriers restrict Wi-Fi calling to and from certain countries. See your carrier for details.

Use caller ID

About caller ID

When you receive a call, caller ID shows the number on the incoming call or lock screens, unless the caller has hidden their information.

When you make a call, those you call will see your number if they use caller ID.

Depending on your services, caller ID may also:

- Show your name when you make a call
- Show incoming callers' personal or business names
- Read aloud the caller's name/number
- Identify potential spam - Google's Caller ID & spam lets you easily block them

Change your caller ID info

To change the information that people see about you when you call, contact your carrier.

Hear caller ID announcement

You can hear the caller's name and number read out loud:

- Every time you receive a call
- Only when you are wearing a headset
- Never

To set it up:

1. Open the **Phone** app.
2. Touch > **Settings** > **Caller ID announcement**.
3. Touch **Announce Caller ID**, then select when you want to hear it.

   To turn the announcement off, select **Never**.

Identify and block spam callers automatically

For numbers that aren't in your contacts, Google can provide information about the number and warnings about potential spam callers.

1. Touch .
2. Touch > **Settings** > **Caller ID & spam**.
3. Turn **See caller and spam ID** on .

4. To prevent ringing and notifications from suspected spam calls, turn **Filter spam calls** on .

   You won't receive notifications for these calls, but you'll see them in your call history and can check any voicemail you receive.

When Caller ID & spam is on:

- If you see “Suspected spam caller” or “Spam” for an incoming call, you can answer the call or block and report the number.
- Your phone may need to send information about your calls to Google.
- It doesn’t control whether your number shows when you make calls.

If you don't want Google to identify spam callers, touch > > **Settings** > **Caller ID & spam** and turn it off .

Turn call waiting on and off

When you’re on a call and a new call comes in, the new call is sent to voicemail. If you want to be notified of new calls instead, turn on call waiting.

Note: Some carriers automatically control call waiting. If you do not see this option on your phone, contact your carrier for more information.

To turn call waiting on:

1. Open the **Phone** app.
2. Touch > **Settings**.
3. Do one of the following:
   - If your phone has one SIM card, touch **Calls**.
   - If your phone has dual SIMs, touch **Calling accounts** and select the SIM.
4. Touch **Additional settings**, then turn **Call waiting** on.

When call waiting is on, if you're on a call and a new call comes in, you can answer it. The first call is put on hold. Touch to merge the two calls.

To turn call waiting off, go to **Additional settings**, then turn **Call waiting** off

Block calls and texts

If you don't want to receive calls or texts from a certain number, you can block it. When the number tries to contact you, your phone will automatically decline the call or text.

Block a number

Use either app to block both calls and texts from a number.

From the Phone app

1. Tap .
2. Touch & hold a call from the number to block.
3. Tap **Block/report spam**.
4. If you don’t want to report the number as spam to Google, remove the checkmark.
5. Tap **Block**.

From the Messages app

1. Touch & hold the conversation thread from the number to block.
2. Tap > **Block**.

   Or, touch (for numbers saved in your contacts).
3. If you don’t want to report the call as spam to Google, remove the checkmark.
4. Tap **OK**.

Unblock a number

Use either app to unblock a number, so you can receive calls and texts from that number.

From the Phone app

1. Tap > **Settings** > **Blocked numbers**.
2. Tap by the number to unblock.

From the Messages app

1. Tap your profile icon > **Spam & blocked**.
2. Tap the blocked conversation.
3. Tap **Unblock**.

Block all numbers for a contact

If a contact has multiple numbers, you can block them all with the Contacts app.

Block a contact's numbers

1. Open the **Contacts** app.
2. Tap the contact's name.
3. Swipe to move down and tap **Block numbers**.
4. If you don’t want to report the call as spam to Google, remove the checkmark.
5. Tap **Block**.

On the contact screen, you'll see by the blocked numbers.

Unblock the numbers

1. Open the **Contacts** app.
2. Tap the contact's name.
3. Tap **Unblock numbers** > **Unblock**.

Block calls from unidentified callers

1. Open the **Phone** app.
2. Touch > **Settings** > **Blocked numbers**.
3. Turn **Unknown** on .

Your phone will block calls from private or unidentified numbers. You'll still receive calls from phone numbers that are stored in your contacts.

Tip: You can also automatically identify potential spam callers and easily block them with Google Caller ID & spam. Learn how to set it up.

View and delete call history

See your call history

To see all recent calls:

1. Touch .
2. Touch .
3. You'll see one or more of these icons next to each call:

Icon	Meaning
	Missed call (incoming)
	Call you answered (incoming)
	Call you made (outgoing)

4. To learn more about a call, touch it, then touch .

To see only your missed calls:

1. Touch .
2. Touch > **Call history**.
3. Touch **Missed**.

Save recent call as contact

You can save a number to make it easy to find and call back later.

To save a number:

1. Touch .
2. Touch .
3. Touch the number.
4. Touch **Add contact**.
5. Select whether to save it to an account or the phone.

6. Do one of the following:
   - To add to an existing contact, touch **Add to existing**.
   - To set up a new contact, add contact details.
7. Touch ✓ or **Save**.

Delete calls from history

Caution: There's no way to restore the history after you delete it.

To delete one call:

1. Touch 📞.
2. Touch 🕓.
3. Touch & hold the number.
4. Touch 🗑.

To delete all calls:

1. Touch 📞.
2. Touch ⋮ > **Call history**.
3. Touch ⋮ > **Clear call history**.

Make emergency call from locked phone

In an emergency, you don’t need to unlock your phone to dial an emergency number (for example, 911 in the US or 112 in Europe).

To dial an emergency number from a locked screen:

1. Swipe up on the lock screen.
2. Touch **Emergency call** to see the dialer.
3. Enter the emergency number for your region and touch .

When you make an emergency call, Emergency Location Service automatically sends your location to emergency responders.

You can also set up an emergency SOS.

Use voicemail

Listen to voicemail

If you've set up voicemail, you'll see in the status bar when a new voicemail message arrives.

1. Do one of the following:
   - Swipe the status bar down and touch .
   - Or, touch , then touch & hold 1.
2. When connected, follow your carrier's system prompts.

If you listen to a new message and disconnect from voicemail without saving or deleting it, you will still see in the status bar.

Manage your mailbox

Your carrier provides your voicemail system.

1. Do one of the following:
   - Swipe the status bar down and touch .
   - Or, touch , then touch & hold .
2. When connected, follow the prompts to manage your messages and mailbox.

Contact your carrier for help with:

- Recovering or resetting your password/PIN for voicemail
- Replaying messages
- Saving, forwarding, or deleting messages
- Replying with or sending voice messages
- Changing number of rings before connecting call to voicemail
- Changing greeting or recorded name
- Changing notification options
- Changing mailbox language

Fix an issue

If remains in your status bar after you listen to your voicemails, try the following.

First, force stop the app:

1. Touch & hold .
2. Touch .

3. Touch **Force stop**.

   This restarts the app and should remove the notification.

If that doesn't help:

1. Call yourself from another phone and leave a short message.
2. Go into your voicemail and delete this message, but wait to hang up until the notification icon has disappeared from your status bar.

Take photos

Open the camera

Do any of the following:

- Press the Power button twice quickly. (If this doesn't work, set up the gesture.)
- Tap .
- From the lock screen, swipe left.

Take a photo

1. If needed, adjust settings such as flash or photo size.
2. Frame your subject:
   - To zoom, drag the viewfinder up or down.
   - To set focus location, tap the screen then drag the focus ring.
   - To change the exposure, tap the screen then slide .
3. To take the photo, do one of the following:
   - Tap .
   - Touch & hold to take a rapid series of photos.
   - Tap for a timer.
   - To tap anywhere on the screen instead of using , tap and turn on **Tap anywhere to capture**.
4. To review your photos and videos, tap thumbnail at bottom right. Then:
   - To view all thumbnails, tap the screen, then tap to open the Photos app.
   - To view photos later, open the Photos app or other photo app you installed.

Take a selfie

1. In the Camera app, tap to switch to the front camera.
2. If needed, adjust the beauty filter.
3. To take the photo, do one of the following:
   - Tap .
   - Tap for a timer.

Take photo with adjustable focus (bokeh)

Keep the subject of your photo in focus and blur the surrounding scene as little or much as you like.

1. In the Camera app, swipe sideways to **Portrait**.
2. Be sure you're within 1.5 meters (5 feet) of your subject. It's best if nothing is in the way and the subject stands out.
3. Move the focus ring to your subject.
4. Tap , then move the slider to increase or decrease blur around the subject.
5. Tap .

Take low-light photo without flash

Switch to Night mode in low light to capture more details and more accurate colors.

1. In the Camera app, swipe sideways to **Night**.
2. Frame your photo, then tap .

Share a photo you've just taken

1. In the Camera app, swipe the screen to the left, and tap the photo to share.
2. Tap .
3. Select the way you want to share.

You can also:

- Share multiple photos at once.
- Copy photos to your computer.
- Display your photos on an HDTV.
- Print photos from your phone.

Fix an issue

If you’re having issues, try these troubleshooting steps.

Take screenshots

Take a screenshot

You can take a screenshot a few ways. Use the one most convenient for you.

1. When you're on the screen you want to capture, choose one:
   - Touch & hold three fingers on the screen. (If this doesn't work, turn **Use Three finger screenshot** on.)

   - Drag from the bottom of the screen and hold to see recent apps, then tap .
   - Press & hold Power + Volume Down simultaneously until the screen is captured.
2. To scroll and capture more content, tap .

   To stop scrolling before the end of the page, tap **STOP** or .
3. Do any of the following:
   - To edit the screenshot, tap .
   - To share it, tap .
   - To analyze it with Google Lens, tap .
   - To delete it, tap .
   - For more time to review it before taking an action, tap the thumbnail to open the screenshot.

Find screenshots later

Open the Photos app and tap **Collections** > **Screenshots**.

Record videos

Record a video

1. Open the camera:
   - Touch .
   - Or, press the Power button twice quickly.
   - On the lock screen, swipe left.
2. Tap **Video** to switch to video mode.
3. If needed, adjust settings:
   - To record a selfie video, tap .
   - To turn the light on, tap .
   - To use location tags, tap and turn **Save location** on .
4. To start, tap .
5. While recording, you can:
   - Take a photo during your video by tapping .
   - Pause recording by tapping .
6. To stop, tap .

Record a timelapse video

1. Attach a tripod or set up your phone so that it can’t move while you record.
2. On the viewfinder, swipe sideways to **Timelapse**.
3. Tap .
4. Use the slider to select the speed multiplier. In general, use a faster speed for longer videos.
5. To start, tap .

   You’ll see two counters, one that shows the duration of the recording and another that shows the duration the video will play when sped up.
6. To stop, tap .

Share a video you've just taken

1. In the Camera app, swipe the viewfinder screen to the left, and touch the video to share.
2. Tap .
3. Select the way you want to share.

You can also:

- Copy videos to your computer using a USB cable.
- Display your videos on an HDTV.

Fix an issue

If you're having issues, try these troubleshooting steps.

Record your screen

You can record a video of your screen while you're using it.

Record screen

1. To start recording, open quick settings and tap **Screen record**.
2. If needed, adjust sound and screen touch options.
   - To mute all sound, turn off.
   - To use sound, turn **Record audio** on, then tap **Record audio** and select the microphone (your narration only), device audio (device sound with no mic for narration), or both.
   - To record a dot on the screen where your finger touches it, turn **Show touches on screen** on.
3. Tap **Start** to start the countdown timer.

   While recording, you'll see in the status bar.
4. To stop recording, swipe down from the top of the screen and tap the red **Recording screen** notification.

Find your recordings

To view a recording immediately after you capture it, swipe down from the top of the screen and tap the notification.

To view any time, open Photos, Files, or another media viewing app, and look for the **Screen record** folder.

Adjust photography settings

Before you take a photo, you can adjust settings to get the best photo for your situation.

Use a timer

Tip: Use a tabletop tripod to stabilize the phone when taking timed shots.

1. If you're taking a selfie, touch .
2. Tap and choose the number of seconds.
3. Frame your shot, and when you're ready, touch to start the countdown.
4. Take your place in the shot (if you're taking a selfie, simply wait) and smile!

Use a flash

To set the flash mode (off, always on, or auto), tap on the Camera screen.

Use HDR in high-contrast lighting

Taking a photo of a bright scene that also includes dark shadows? Use HDR (High Dynamic Range) mode. The camera captures multiple exposure levels and combines them into a single photo for vibrant colors and more detail in both light and dark areas.

To set HDR mode (off, always on, or auto mode), tap HDR on the Camera screen.

HDR is best for:

- Landscapes with bright sky and shaded hills or foliage
- Outdoor portraits with lots of contrast
- Backlit scenes with dark shadows and streams of sunlight
- When both the camera and subject are stationary

Do **not** use HDR for:

- Action shots
- Low-light indoor photos
- When you want to use the flash or the front camera

When the camera detects a high contrast scene, it automatically goes into HDR mode, and HDR appears in the viewfinder. Consider whether HDR mode would improve the photo or not.

Use beauty filter

Your front (selfie) camera includes a beautification filter. Use it to:

- Soften and even skin tone

- Remove blemishes and shine
- Whiten teeth
- Highlight T-zone
- Slenderize face
- Enlarge and brighten eyes

To use the filter:

1. Make sure you're using the front camera. (Touch if needed.)
2. Swipe down from the top of the screen, and next to **Face Beauty**:
   - Tap to use automatic mode.
   - Tap to use a slider to adjust the filter's intensity.
3. Smile and touch to take the picture.

To turn the filter off, tap and move the slider to 0.

Adjust photo size

Lower resolution photos and videos take up less space, but have lower image quality.

1. On the Camera screen, tap the current photo size.
2. Tap **Rear photo resolution**.
3. Select **High** (for better quality but larger file size) or **Standard: Recommended**.

Tip: If you're running low on internal storage, adjust settings to save new photos on your SD card.

Fix an issue

If you’re having issues, try these troubleshooting steps.

Adjust other camera settings

Store photos and videos on SD card

To set your camera to save new photos and videos on your SD card:

1. Be sure you inserted an SD card.
2. On the Camera screen, tap **Settings**.
3. Tap **Storage** > **SD card**.

You can also move existing photos and videos from internal storage to the SD card.

Use location tags

When you take photos or videos, you can embed data about the location where you took them.

On the Camera screen, tap **Settings** and turn **Save location** on .

You need to turn on location-based services to use this feature.

Turn shutter sound on/off

On the viewfinder, tap **Settings** and turn **Shutter sound** on or off .

Delete photos and videos

You can delete photos and videos:

- Just from your phone's storage.
- From both your phone's storage and your Google account backup

Tip: Keep the photos but free your phone storage. You can schedule automatic deletion of photos from your phone if they're backed up to your Google account.

From the Camera app

1. Tap the photo thumbnail (next to).
2. Do one of the following:
   - To delete it from your phone's storage and your Google account backup, tap . (If you don't see the icon, tap the screen first.)
   - To delete it only from your phone's storage, tap > **Delete from device**.

From the Photos app

1. From the list of thumbnail photos:
   - To select one item, touch & hold it.
   - To select multiple items, touch & hold the first one, then tap the others.
2. Do one of the following:
   - To delete it from your phone's storage and your Google account backup, tap .
   - To delete it only from your phone's storage, tap > **Delete from device**.

Recover deleted photos and videos

If you automatically back up photos to your Google account, you have some time to recover deleted items. When you delete a photo or video, it's moved to the Trash in the Photos app for several weeks, before being deleted forever.

To recover a photo or video:

1. Open the **Photos** app.
2. Tap **Collections** > **Trash**.
3. Touch & hold the photo or video.
4. Tap **Restore**.

If you don't back up photos to your Google account, to maximize use of your phone's internal storage space, there's no undo. Once you delete something from your phone's storage, it's gone. You can try using a third-party app to recover recently deleted photos or videos.

Fix an issue

If you're having issues, try these troubleshooting steps.

Edit photos and videos

Edit photos

1. Open the photo in the **Camera** or **Photos** apps.
2. Touch the photo, then touch .
3. Touch a tab to access editing options.

Tab	Editing options
Suggestions	Enhance automatically or apply overall warm or cool tones
Crop	Crop, rotate, or straighten photo
Adjust	Change brightness, contrast, color, vignette
Filters	Apply preset effects
More	Use drawing tools (Markup) or edit screenshots

4. While editing an image, you can:
   - Undo your last change. Touch .
   - Redo a change you reversed. Touch .
5. When finished, touch **SAVE**.

Edit videos

1. Open the **Photos** app.
2. Touch the thumbnail to open the video, then touch .
3. Do any of the following:
   - Trim the video. Drag the sliders to outline the frames to save.
   - Change orientation for playing the video. Touch .
   - Steady a shaky recording. Touch .
4. Touch **SAVE**.

Find photos and videos

Photos/videos you took

To search for photos or videos:

1. Open the **Photos** app.
2. Touch **Search**, then in the search box, type a search term, such as a location or person's name.

Make sure back up and sync is on. You can only search backed up photos.

To browse for photos or videos:

1. Open the **Photos** app.
2. Do one of the following:
   - To scroll through photos and videos by date, touch **Photos**.
   - To view photos and videos stored on your phone, touch **Collections**.
3. Touch a thumbnail to open the photo or video.

To learn more, touch your profile icon > **Help & Feedback** in the Photos app.

Photos/videos from text messages

To find photos you've saved from text messages:

1. Open the **Photos** app.
2. Touch **Collections**.
3. Touch the name of your messaging app. (Swipe left if needed.)

Photos/videos from WhatsApp, Instagram, other apps

1. Open the **Photos** app.
2. Touch **Collections**.
3. Touch the name of the app. (Swipe left if needed.)

Missing photos/videos

If you're having trouble finding photos or videos, read Google's support information.

Storage location

Photos and videos you've taken are stored on your phone (internal storage) or on your SD card, depending on your setting.

For either internal storage or the SD card, look in these folders.

Folder	Type of photo/video
DCIM	Taken with Camera app
Pictures/PhotosEditor	Your edited photos. Also check DCIM for edited photos.
Pictures/Screenshots	Screenshots
Pictures/[app]	Saved from messages or photo sharing apps

Share photos and videos

You can wirelessly share one, multiple, or all items from any Photos view, sending them as email or message attachments, uploading to the cloud, or using device-to-device connections like Bluetooth.

In addition to sharing wirelessly, you can transfer photos to your computer with a USB connection. You can also move photos from internal memory to SD card.

To share wirelessly:

1. Open the **Photos** app.
2. Navigate to the thumbnail of the item you want to share.
3. Select the item to share:
   - To select one item, touch & hold its thumbnail.
   - To select multiple items, touch & hold the first thumbnail, then touch the others to select them.

   Tip: To clear all selections, touch ✕ at the top of the screen next to the number selected.
4. Touch and select the way you want to share.

About wireless sharing

What you can share

You can share your photos and videos, contacts, screenshots, and downloaded files.

When sharing photos and videos

When deciding how to share your photos or videos, consider these factors:

- Resolution (high versus low) of the photo or video; high resolution uses more data
- Number of photos to share (one photo or a few or an entire vacation album)
- Whether you want to share on the internet or from device-to-device
- Length of availability for sharing

Ways to share

Choosing how to share depends on the type and amount of content you're sharing, and how widely you want to share it.

Quick Share

Good for:

- Sharing securely with nearby devices
- Sharing a link, a contact, one or a few photos
- Fast, immediate sharing

Things to consider:

- The other device must be within 1 foot (30 cm).
- Can't be used to share with iPhones.
- No Wi-Fi or cellular data connection required.

Learn more.

Bluetooth

Good for:

- Sharing from phone-to-phone or other connected device
- Fast sharing

Things to consider:

- Your phone must be paired and connected with another device.

NFC

Good for:

- Quickly sharing with a nearby phone, tablet, or computer
- No need for pairing devices (Simply touch them back-to-back.)

Things to consider:

- Devices you share with must have NFC.
- Both your phone and the other device must be on and unlocked.

Learn how

Message (MMS)

Good for:

- Sharing one photo or a low-resolution video
- Sharing with a friend or group
- Sharing immediately, as an event is happening

Things to consider:

- You and your recipients must have cellular data plans to receive multimedia text messages.
- Sending high resolution photos via text message uses more more data.
- Photos and video remain available until the recipient deletes the message.
- High quality videos are too large and cannot be shared in text messages.

Learn how

Email

Good for:

- Sharing one or a few photos
- Sharing with a friend or group

Things to consider:

- Some email providers limit attachment sizes. For large files, upload the file to a cloud storage and email the link instead of the file.
- Email attachments remain available for download until the recipient deletes the email.

Learn how

Cloud

Good for:

- Sharing high resolution photos, multiple photos, entire albums, and videos
- Controlling sharing via links

- Controlling how long you share something (You can easily delete it or turn off sharing privileges.)

Things to consider:

- Many cloud services offer free storage with a basic account.
- Cloud storage services are fairly secure, but not completely free from security breaches, so upload wisely.
- Upload over Wi-Fi to prevent cellular data charges.

Learn how

Social app

Good for:

- Sharing publicly, with large groups of friends, followers, and subscribers
- Sharing one photo at a time, or many photos, albums, or videos
- Controlling how long you share something (You can easily delete it or turn off sharing.)

Things to consider:

- Understand social network privacy and sharing policies before you post.
- Review updates to social network privacy and sharing policies often.
- Requires a Wi-Fi or cellular data connection.

Upload photos and videos

Back up automatically

1. Open the **Photos** app.
2. Touch your profile icon > **Turn on backup**.

   You can change back up settings any time.

Adjust back up settings

To adjust settings for your automatic backups:

1. Open the **Photos** app.
2. Touch your profile icon > **Photos settings** > **Backup**.
3. Adjust settings as needed:
   - To choose high quality or original size for uploads, touch **Backup quality**.
   - To back up items in your Download, Screenshots, and third-party app folders, touch **Back up device folders**.
   - To back up items over your cellular network, touch **Mobile data usage**, then adjust options for photos, videos, and roaming.

Back up manually

1. Open the **Photos** app.
2. Open the photo or video.
3. On the photo or video, touch . (Swipe up if you don't see .)

View your backed up photos and videos

From your phone, open the Photos app.

From your computer, sign in to photos.google.com.

Manage your storage

1. Open the **Photos** app.
2. Touch your profile icon > **Photos settings** > **Backup**.
3. Touch **Manage storage**.
4. View how many GB of storage you have used and approximately how much time your remaining storage will last. If you're running low, follow onscreen instructions to get more storage.

5. To review and delete recommended photos:
    a. Under **Review and delete**, touch a category (such as large photos and videos, blurry photos, screenshots).
    b. Touch & hold an item to delete, then touch others to include.
    c. Touch .

More help

To learn more, read Google's help.

Listen to radio

Listen to FM stations

Your phone automatically tunes to radio stations with the best signal. Listening to the radio doesn't use your mobile data.

1. Plug headphones (any brand) into your phone. They serve as a radio antenna and allow you to scan for stations. Even when you listen through your phone's speaker, Bluetooth wireless speakers, or wireless headphones, you still need the wired headphones as your antenna.
2. Open the **FM Radio** app.
3. Use these icons to control the radio.

Icon	Action
	Change headphones/speaker
	View stations
	Rescan stations
	Skip to previous/next station
	Turn radio off/on

Tip: If you're having reception issues, try moving your phone as far from the headphones as possible to increase the size of the antenna. Or, try moving a short distance, towards a window if you are inside or away from buildings if you are outside.

Manage your favorites

Use these icons to manage your favorite stations.

Icon	Action
	Add station to favorites

	Remove station from favorites
	View/listen to favorite stations

Record current station

Use these icons to create and listen to recordings.

Icon	Action
	Start recording
	Stop recording
	Listen to recording: **Saved recordings** > Delete recording: **Saved recordings** > touch & hold a recording >

To share a recording:

1. Open the **Files** app.
2. Tap **Audio** > **FM Recording**.
3. Tap > **Share**.

Listen to music

Get music

Stream songs or download them to your phone so you can listen when you're on an airplane or don't have an internet connection.

Your phone can play MP3, FLAC, M4A, AAC, AAC+, MIDI, and WAV files.

To get music, do any of the following:

- Purchase it in a music app. Then stream it or download it using that app.
- Transfer it over USB or Bluetooth from your computer to your phone's Music folder.
- Upload it from your computer to the cloud and listen on any internet-connected device.

Stream songs with YT Music

Easily find your favorite albums, singles, and live performances, and get recommendations for new music.

The streaming service is free and contains ads.

The paid, premium service offers:

- Ad-free, uninterrupted music
- Continuous play when the screen is locked
- Downloads for listening offline

To get started:

1. Open the **YT Music** app.
2. Touch to search for music, or use the tabs to browse:
    - **Home**: Get customized stations and recommendations based on your mood, activity, or listening history.
    - **Explore**: Browse newest releases, or choose a playlist for your mood.
    - **Library**: Add songs, albums, and playlists to your library.
3. To learn more about features or subscription pricing, tap your profile icon > **Help & Feedback**.

You can listen through your phone's speaker or by pairing with a Bluetooth speaker.

Enhance your music with Dolby Atmos

Want to tweak your sound? Open the **Dolby Atmos** app to use a preset Music sound profile, which you can customize. Or set up your own sound profile. Learn more.

Transfer music files

About transferring music

You can move music files you've bought and saved on your devices to other devices you own.

Music apps that share music files from cloud storage usually just share links to the files instead of transferring them between devices. To transfer music files, the music needs to be stored on the device.

Send files over Bluetooth

To send music files stored on your phone:

1. Pair your phone with the device receiving the music.
2. On your phone, open the **Files** app and tap **Audio**.
3. Touch & hold the file.
4. Touch and select **Bluetooth**.
5. Touch the name of the paired device.

   During file transfer, you'll see in the status bar. To check the status, see the notification.

Receive files over Bluetooth

1. Pair your phone with the device sending the music.
2. On the device sending the music, start the file transfer, following device's instructions.
3. When you receive the Bluetooth notification on your phone, swipe down and tap it, then tap **Accept**.

   During file transfer, you'll see in the status bar. To check the status, open the notification.

The files are saved in Music/Bluetooth, where music apps will find them. You're ready to listen!

Transfer music from your computer

To move your music from your computer to your phone, connect them with a USB cable and copy the files to your phone's Music folder.

Connect a MIDI device

To connect a MIDI device:

1. Make sure you have:
   - A USB cable that's capable of data transfer and isn't for charging only.
   - A USB OTG adapter cable, if needed.
2. Turn the phone and MIDI device on.
3. Connect them with the USB cable (and adapter if needed).
4. Unlock the phone.
5. Change the USB connection type to allow MIDI connection:
   a. Swipe down from the top of your home screen and tap the **Charging this device via USB** notification.
   b. Tap **MIDI**.

Connect to Wi-Fi networks

Turn on and connect

Open quick settings and tap to turn Wi-Fi on.

Your phone will automatically connect to Wi-Fi networks you've used before. If there aren't any, you can search for nearby networks and connect with one.

When you're connected, you'll see in the status bar.

Change, share, remove networks

After connecting to a Wi-Fi network, your phone saves its details to automatically connect to previously used networks. You can manually connect to a different nearby network, share a network, or remove a saved network you no longer want to connect automatically.

Search for new networks

To scan for nearby available networks that you haven't connected to before:

1. Open quick settings, then touch & hold .
2. Turn **Wi-Fi** on .

   You'll see a list of available networks. If a network needs a password, you'll see .
3. Do one of the following:
   - If the network is open (no), tap its name to connect.
   - To type a password from the network owner, tap the network to connect to, then enter the password. For your home network, get the password from the label on the Wi-Fi router. For a public network, get the password from the business or organization.
   - To connect using a QR code, swipe to **Add network**, then tap and scan the code.
   - If the network is hidden, you'll need to set it up before it'll show up in the list of available networks.

Change networks

To switch to a network you've used before:

1. Open quick settings, then touch & hold .
2. In the list of nearby networks:
   - To connect to a different network, tap its name.
   - To change settings for the currently connected network, tap > .
   - To change settings for a saved, disconnected network, touch & hold its name, then tap **Modify**.

Share a network

You can share connection information with a friend so they can connect to the same network.

1. Open quick settings, then touch & hold .
2. Tap the network you're connected to, then tap .
3. Show the person the code to scan or the Wi-Fi password to type.

Remove a network

If you don't want to automatically connect to a saved Wi-Fi network, you can forget that network.

1. Open quick settings, then touch & hold .
2. If the network appears in your list of nearby networks, tap its name, then tap **Forget**.
3. To review all of your saved networks, tap **Saved networks**. For each network you want to remove, tap its name, then tap **Forget**.

Turn Wi-Fi off

To save battery life, turn off Wi-Fi when you're not near a Wi-Fi network.

Open quick settings and tap to turn it off.

Advanced Wi-Fi settings

Disable Wi-Fi scanning

1. Go to **Settings** > **Location**.
2. Tap **Location services**.
3. Tap **Wi-Fi scanning** and turn it off

If you turn this off, apps that use your location won't work as well.

Connect to hidden networks

1. Open quick settings, then touch & hold .
2. Below the list of networks, tap **Add network**.
3. Enter the SSID (network name), security type, check **Show password** and enter the password.
4. Tap **Advanced options**, and change **Hidden network** to **Yes**.
5. Tap **Save**.

   The hidden network is now visible in the list of available networks, and if you weren't connected to Wi-Fi previously, you're now connected.
6. If you were connected to Wi-Fi when you added the hidden network, in the list of available networks, tap the name of the saved network, then tap **Connect**.

Connect with Wi-Fi Direct

If you have a device, like a printer or TV, that supports Wi-Fi Direct, you can connect your phone without a wireless router or cable.

When you turn on your phone’s Wi-Fi, Wi-Fi Direct is automatically enabled.

To connect to a Wi-Fi Direct device:

1. On the device you want to connect, set up Wi-Fi Direct. For instructions, see that product's user guide.
2. On your phone, go to **Settings** > **Network & internet** > **Wi-Fi** > **Network preferences**.
3. Tap **Wi-Fi Direct**.

   You'll see a list of Wi-Fi Direct devices that are within range and compatible.
4. Tap the device’s name to connect.

Use Airplane mode

Airplane mode turns off all wireless connections on your phone to prevent it from transmitting signals that could interfere with airplane communications.

Turn it on

Open quick settings and tap ✈ to turn airplane mode on. This disables all wireless connections (Wi-Fi, voice and data for calls and text messages, Bluetooth). If your airline permits it, you can then turn Wi-Fi and/or Bluetooth back on during the flight. Other wireless connections will remain off.

Turn it off

Open quick settings and tap ✈.

Control data usage

Turn mobile data off/on

Open quick settings and tap **Mobile data**.

When you turn off cellular data, you can still use data over Wi-Fi.

Cellular data must be ON if you want to:

- Receive or send multi-media messages
- Share your phone's internet connection with other devices

Set data warning and limit

Data plans often have limits, and it's easy to exceed them. Setting up a usage warning can prevent surprises by alerting you when approaching your limit. You can even set a usage limit to turn off cellular data when it's reached, eliminating unexpected charges.

1. Go to **Settings** > **Network & internet** > **Mobile network**.

   Or, in quick settings, touch & hold .

2. Tap the SIM name.
3. Tap **Data warning & limit**.
4. To set a warning, turn **Set data warning** on , then tap **Data warning** and enter the amount of data.
5. To set a usage limit, turn **Set data limit** on , then tap **Data limit** and enter the amount of data.

Restrict background data

Even when you're not actively using them, most apps use data in the background to sync information and deliver notifications.

To conserve data when you're running low, use Data Saver to turn off background data for all apps. You can also prevent specific apps from ever using background data, whether Data Saver is on or not.

Notifications stop: When you turn off background data for an app, you won't receive ANY notifications from the app until you open the app so it can sync.

Restrict for all apps when you're low on data

1. Go to **Settings** > **Network & internet** > **Data Saver**.
2. Turn **Use Data Saver** on .

   You'll see in your status bar and all apps are prevented from using background data.

3. To allow certain apps to continue using background data, tap **Unrestricted data**, then next to the app name, slide the switch on .

Restrict for specific apps indefinitely

1. Go to **Settings** > **Network & internet** > **Mobile network**.
2. If you're using two SIMs, tap the SIM name.
3. Tap **App data usage**.
4. Tap an app, then turn **Background data** off .

Dual SIMs

If your phone has two SIMs, cellular data is active on only one SIM at a time. You can control which SIM is used.

Share your internet connection

When you need an internet connection for another device, share your phone's:

- For wireless sharing with another Wi-Fi capable device, turn on your Wi-Fi hotspot, which is great for range and speed. This uses more power, so it's best when you can plug in.
- For wireless sharing with a device in close proximity (like a phone next to a computer), you can use Bluetooth tethering, offering you less interference in crowded Wi-Fi environments, more privacy, and less power consumption than your Wi-Fi hotspot.
- To share over a physical connection, connect your phone to a device with a USB cable, providing a more stable, speedy, and safe connection in some situations than sharing over wireless connections.

Your cellular plan must support data sharing. If you don’t know, contact your carrier.

Use your hotspot

Step 1: Set it up

1. Check that:
   - Cellular data is on. (If cellular data is off, your phone doesn't have an internet connection to share.)
   - Data Saver is off.
2. Go to **Settings** > **Network & internet** > **Hotspot & tethering**.
3. Tap **Wi-Fi hotspot** and do any:
   - Make it easier to find and connect to your hotspot. Tap **Hotspot name** and change it.
   - Prevent others from seeing your phone's network name. Check **Hide my device**.
   - See your current password or change it. Tap **Hotspot password**.
   - Improve hotspot signal. For less interference, change the broadcast channel/band to 5GHz. For a stronger signal, change it to 2GHz. (This feature is not available in all countries.)
   - Help other devices find your hotspot. Make sure **Extend compatibility** is on .
   - Increase the hotspot connection speed. If you no longer need to assist others in finding your hotspot, turn **Extend compatibility** off.
   - Limit the number of devices that can connect, or restrict access to only devices you specify. Tap **Manage devices**.
   - Save battery life. Tap **Timeout setting** to configure when the hotspot should automatically turn off if no one is using it.

Step 2: Connect devices

1. Check that cellular data is on. If cellular data is off, your phone doesn't have an internet connection to share.
2. Go to **Settings** > **Network & internet** > **Hotspot & tethering**.
3. Tap **Wi-Fi hotspot**.

4. Turn **Use Wi-Fi hotspot** on , then plug in your phone to charge. Using the hotspot really drains the battery!

   When your hotspot is active, you'll see in the status bar.

5. Set up the connection.

To connect	Do this
A phone	a. On your phone, next to the hotspot's name, tap and unlock if prompted. b. Use the other phone's camera to scan the QR code that provides the password.
Other device	a. Open the device's Wi-Fi settings. b. Select your phone's hotspot. c. Enter the hotspot password. Learn how to find the hotspot's password.

View or change password

1. Go to **Settings** > **Network & internet** > **Hotspot & tethering**.
2. Tap **Wi-Fi hotspot**.
3. Tap **Hotspot password** to see the current password.
4. To change the password, type over the current password.

Note: Although you can turn off passwords for your hotspot, keeping a password prevents unauthorized usage of your cellular data.

Manage hotspot connections

View number of connections

To see the number of devices connected to your hotspot:

- In quick settings, look below .
- Or, go to **Settings** > **Network & internet** > **Hotspot & tethering** and look under **Wi-Fi hotspot**.

Control connections with a list

You can limit who can connect to your hotspot with its password or QR code:

- Normal Mode: Allow any device to connect.
- White List Mode: Only allow devices to connect if they're on your list.

To switch modes:

1. Go to **Settings** > **Network & internet** > **Hotspot & tethering**.
2. Tap **Wi-Fi hotspot** > **Advanced** and turn **White List Mode** on or off.

To add a device to your whitelist:

1. Go to **Settings** > **Network & internet** > **Hotspot & tethering**.
2. Tap **Wi-Fi hotspot**.
3. Add devices:
   - If the device is already connected, tap it and tap **ADD WHITELIST**.
   - Otherwise, tap **+ Manually Add WhiteList Device**, type a name and the device's MAC address, then tap **ADD WHITELIST**.

   The added device will appear in your list.

To remove a device from the list, tap it, then tap **Remove**.

Block a connected device

1. Go to **Settings** > **Network & internet** > **Hotspot & tethering**.
2. Tap **Wi-Fi hotspot**.
3. Tap the connected device, then tap **BLOCK**.

   The device is disconnected from the hotspot and will not be able to reconnect.

Disconnect everyone

To disconnect all devices and prevent them from reconnecting:

1. Turn the hotspot off.
2. Change the password.
3. Turn the hotspot back on to continue using it.

USB tethering

To connect a device to the internet using your phone's cellular data and a USB cable:

1. Check that cellular data is on. If cellular data is off, your phone doesn't have an internet connection to share.
2. Connect your phone to your computer with a USB cable.
3. On your phone, go to **Settings**.
4. Tap **Network & internet** > **Hotspot & tethering**.
5. Turn on **USB tethering** to start the connection.

   You'll see in your notifications.

To stop the connection, tap the notification and turn off **USB tethering**, then disconnect your phone and computer.

Bluetooth tethering

To connect a device to the internet using your phone's cellular data and a Bluetooth connection:

1. Check that cellular data is on. If cellular data is off, your phone doesn't have an internet connection to share.

2. Turn on Bluetooth on your phone and pair with the other device.
3. Set up the other device to get its network connection via Bluetooth.
4. On your phone, go to **Settings**.
5. Tap **Network & internet** > **Hotspot & tethering**.
6. Turn on **Bluetooth tethering** to start the connection.

To stop the connection, turn off Bluetooth or touch & hold in quick settings and disconnect the device.

Connect to VPNs

A virtual private network (VPN) lets you access files on a secure network like an office network with a firewall. Contact your network administrator for VPN settings and any additional apps or requirements.

To set up a VPN connection:

1. Go to **Settings** > **Network & internet**.
2. Tap **VPN**. If prompted, set a screen lock PIN or password.
3. Tap +.
4. Choose the type of VPN and enter settings from the network administrator.
5. To always remain connected to the VPN, check **Always-on VPN**.
6. Tap **Save**.

The network is stored in the VPN list so you can select it when you need to connect.

Add a Private DNS service

Private DNS protects you when you browse the internet and use apps on your phone. It:

- Encrypts your data over a secure channel
- Prevents you from being redirected to fraudulent websites that appear legitimate
- Prevents you from receiving fraudulent communications from sources that appear legitimate (phishing)
- Prevents others from stealing your information as it’s being sent or received (snooping)

Your phone is set to **Private DNS** > **Automatic** by default. So, as long as your mobile or internet service providers offer encrypted DNS, you're protected. Check with your mobile and internet providers.

Private DNS services

The only time you need to change this setting is if you have a free or paid DNS service to use, instead of relying on your mobile or internet providers. To add the service to your phone:

1. Go to **Settings** > **Network & internet** > **Private DNS**.
2. Select **Private DNS provider hostname**.
3. Touch **Enter hostname of DNS provider**.
4. Enter the URL for your DNS provider and touch **Save**.

If you no longer want to use the private DNS service:

1. Go to **Settings** > **Network & internet** > **Private DNS**.
2. Select **Automatic**.

   We don't recommend turning Private DNS off.

Connect with Bluetooth

You can use Bluetooth to connect your phone to other devices without a cord. After you pair a Bluetooth device for the first time, your devices can connect automatically.

Turn Bluetooth on/off

Bluetooth uses more of your battery, so turn it off when not in use.

1. Open quick settings.
2. Tap to switch it on/off.

Pair with and use devices

To connect with a new Bluetooth accessory or other device, you need to pair with it. You only need to do this once for each device.

Your devices stay paired until you unpair them.

Pair with a device

1. Set the device you want to pair (accessory, computer, other phone, etc.) to Bluetooth discovery mode so that your phone can find it. See the device manufacturer's instructions.
2. On your phone, go to **Settings** > **Connected devices**.
3. Tap .

   As the phone searches for available devices, you'll see .
4. Tap an available device to connect.
5. Do any of the following:
   - If a pairing code appears on your phone and Bluetooth device, make sure the codes match. (If they don't, tap **Cancel**, verify the name of the device you want to pair with, and try again.)
   - If your device shows a passkey (like 0000 or 1234), enter it on your phone. If you don't see a place to enter it, swipe down from the top of your screen and tap the Bluetooth notification.
   - If your device doesn't show a passkey and you must enter one for the device to pair, see the device manufacturers' instructions.
6. Tap **Pair** on your phone. Check the other device for a pairing prompt as well; if it has one, you'll need to confirm on both devices or pairing will fail.
7. Set sharing options if you'll want to share contacts, phone audio, media audio, or internet access.

Tip: If you use a screen lock, you can define a paired Bluetooth device as a trusted device, keeping your phone unlocked while connected to it. When you disconnect or move out of range, your phone locks again. Go to **Settings** > **Security & privacy** > **More security & privacy** > **Extend Unlock** > **Trusted devices**.

Can't pair? Troubleshoot the issue.

Use paired device

Tip: Bluetooth connections can really drain your battery. Save power by turning Bluetooth off when you're not connected to a device.

After pairing with a device, you'll need to set sharing options and then you can use Bluetooth to:

- Make or receive calls with a headset
- Make or receive calls and play music over your car's audio system
- Transfer music
- Share photos
- Share contacts
- Share your phone's internet connection with your computer

Reconnect with a device

1. Open quick settings and turn on.
2. Turn on the Bluetooth device.

Configure, rename, or remove

Set sharing options for paired device

1. Go to **Settings** > **Connected devices**.
2. Tap by the device's name.
3. Turn sharing options on or off.
4. On the paired device or in the device's app, look for Bluetooth settings to review and adjust. For more information, see the paired device manufacturer's instructions.

Change phone's name

You'll see your phone's name on other Bluetooth devices when you're pairing with them. You can change the name.

1. Go to **Settings** > **Connected devices**.
2. Tap > **Device name**.

Remove (unpair) a device

1. Go to **Settings** > **Connected devices**.
2. Under Saved devices, find the device to remove. Tap **See all** if needed.
3. Next to the device, tap .
4. Tap > **Forget device**.

Turn off Bluetooth scanning

When Bluetooth is off, your phone can still scan and automatically connect to a previously paired device. To prevent this, turn off Bluetooth scanning.

To turn off scanning:

1. Go to **Settings** > **Location**.
2. Tap **Location services**.
3. Turn **Bluetooth scanning** off .

If you turn this off, apps that use your location won't work as well.

Make contactless payments

Only some versions of this phone, sold in certain countries, support this feature.

Use NFC (near-field communication) to pay quickly and securely at checkout registers by touching your phone to an electronic reader.

Set up contactless payment

1. Make sure you have:
   - Set up a payment app on your phone. Install one from Play Store if needed.
   - Turned on NFC.
2. Go to **Settings** > **Connected devices** > **Connection preferences**.
3. Tap **NFC** and make sure it's on.
4. Tap **Contactless payments** and adjust settings:
   - To change payment apps, tap **Default payment app** and select the app.
   - If you have multiple payment apps, tap **Use default payment app**, then chose when to use your default app (always or except when another payment app is open).

Note: This feature manages payment apps. It doesn't include money transfer apps.

Make a payment

1. Make sure NFC is on and that the terminal has this symbol:

2. Unlock your phone and tap its back to the terminal.

   Your payment app might require you to open the app and enter a PIN before touching your phone to the terminal.

Turn off contactless payment

Turn off NFC.

Tip: You can also open your payment app and turn off contactless payments. Not all payment apps support this option.

Share or receive with NFC

Only some versions of this phone, sold in certain countries, support this feature.

NFC (near-field communication) makes it easy to securely share with sources you trust, without having to type a lot of information or struggle with pairing.

Turn NFC on

1. Go to **Settings** > **Connected devices** > **Connection preferences**.
2. Tap **NFC** and turn it on .

   If you don't see this option, then your phone doesn't support NFC.

Share content between devices

Share content from your phone to another device by touching the devices together (usually back to back).

You can share content using the Files app. To learn how, read Google's help.

Read NFC tags on posters and signs

Receive web links, e-coupons, brochures, maps, and more from an NFC tag. Look for the NFC logo on NFC-enabled accessories, posters, signs and store displays. Just touch the back of your phone to within 2 cm of the logo to receive its tag information.

Enable NFC icon in status bar

To know whether NFC is on by glancing at your status bar:

1. Go to **Settings** > **Connected devices**.
2. Tap **Connection preferences** > **NFC**.
3. Turn **NFC icon** on .

When NFC is on, you'll see in your status bar.

Turn NFC off

Open quick settings and tap .

Share files and links with nearby devices

Share content easily and securely. You can share things like photos or videos, contacts, documents, and links. Send them to another device near you without using an internet connection.

You can share with Android 6+ devices and Chromebooks, and with selected Windows devices through an app. Sharing with iPhones isn't supported. For more about supported devices and countries, see Google's help.

Send and receive content

Turn on sharing

1. Open quick settings and tap .

   Or, go to **Settings** > **Connected devices** > **Connection preferences** > **Quick Share**.
2. Tap **Who can share with you**.
3. If prompted, turn on Bluetooth and location.
4. Choose who can see your phone for sharing.

Share content

1. Open the content to share.
2. Tap or tap > **Share**, then select **Quick Share**.

   Your phone will look for nearby devices.
3. Hold your phone and the other phone close to each other.
4. When you see the other phone in your list of nearby devices, tap its name to send the item.

   The other person can accept or reject the transfer.

Receive content

1. When someone shares content with you, you'll get a notification.

   If needed, tap the notification to make your phone visible.
2. To get the content, tap **Accept**.

Turn off sharing

1. Open quick settings and tap .
2. Turn **Who can share with you** off .

Tip: You can change your phone's name to something less identifiable before sharing or receiving. Go to **Settings** > **Connected devices** > **Connection preferences** > **Quick Share** > **Device name** and edit the name.

Choose who can see you for sharing

To adjust who can share with you:

1. Open quick settings and tap .

   Or, go to **Settings** > **Connected devices** > **Connection preferences** > **Quick Share** > **Who can share with you**.

2. Choose who can see your phone for sharing:

   - **Your devices**: Your phone is visible to your other devices that are signed into the same Google account, even when the screen is off or locked.
   - **Contacts**: Your phone is visible to your nearby contacts when the screen is on and unlocked.
   - **Everyone**: Your phone is visible to anyone nearby when the screen is on and unlocked. To limit access to 10 minutes, mark the checkbox.

   If a contact isn't available, you'll need to add an email address associated with their Google account to their contact info.

Fix an issue

If you can't share content with someone, try these steps:

1. On both phones, check that Bluetooth is on.
2. On both phones, check that Location is on.
3. Bring the devices close together, within 1 foot (30 cm) of each other.
4. Turn airplane mode on and then off.
5. Turn your phone off and then on again.
6. Wait until no one else is sharing content with the other phone.

Transfer files between phone and computer (USB)

You can transfer music, photos, and other files between your phone's storage and computer (in either direction). Use a USB cable that's capable of data transfer and isn't for charging only.

Step 1: Connect phone to computer

1. With the phone and computer turned on, connect the phone and computer with a USB cable.
2. Unlock the phone.
3. Change the USB connection mode for the type of file you're transferring: **File transfer** or **PTP** for photos and videos.
4. If you're transferring videos, you can convert them to AVC (advanced video coding) so they're compatible with more media players. Although they'll play on more media players, the quality may be reduced. Turn **Convert videos to AVC** on or off.

Step 2: Transfer files

With a Windows computer

1. Ensure the phone is properly connected to the computer using the steps above.

   If you don't unlock the phone and change the USB connection to allow file transfers, you won't see any files on your phone.
2. On your computer, open File Explorer, click the name of your phone, and navigate to its internal storage or SD card.
3. If you selected **PTP** when you connected the phone, in File Explorer choose whether to import pictures and videos automatically or manually.
4. Open a second File Explorer window to see your computer folders.
5. Navigate to the folders or files to transfer, then drag and drop them to and from the open phone storage and computer folders.

With a Mac

1. Ensure the phone is properly connected to the computer using the steps above.

   If you don't unlock the phone and change the USB connection to allow file transfers, you won't see any files on your phone.
2. On your computer, download the Android File Transfer application from www.android.com/filetransfer and follow the onscreen instructions.

Where to find transferred files

Files are stored in these folders on your phone:

- **DCIM**: (Digital Camera Images) Photos and videos taken with the Camera app
- **Pictures**: Photos you edited and photos from apps other than Camera
- **Download**: Files downloaded from the internet

- **Music**: Files for apps that play music
- **Ringtones**: Sound files for ringtones
- **Notifications**: Sound files for notifications
- **Alarms**: Sound files for alarms

Fix an issue

If you're having issues, try these troubleshooting steps.

Change USB preferences

Available USB modes

File transfer: Allow all types of files to transfer from your phone to another device.

USB tethering: Share your phone's mobile data connection with another device.

MIDI: Connect electronic musical instruments.

PTP: Allow only photos to transfer from your phone to another device.

No data transfer: Charge battery over USB.

Change USB mode

The default USB mode is **No data transfer**, which means your connection is charging the phone only. To allow your phone to communicate across USB for anything other than charging the phone, you need to change the USB connection mode.

From the popup

1. Connect your phone to another device using your USB cable.

   You'll see a popup that lets you choose the connection mode.

2. Tap the mode you want to use. If you don't see the mode, tap to open the full settings screen, then select it.

From notifications

1. With your phone connected to another device using your USB cable, swipe down from the top of the screen and look for the notification, which shows your current USB mode.
2. Tap if needed.
3. Tap the notification for more options.
4. Tap the mode you want to use.

From Settings

1. With your phone connected to another device using your USB cable, go to **Settings** > **Connected devices** > **USB**.
2. Under **Use USB for**, select a mode.

Keep in charging mode only

If you don't want to see a popup with choices of USB modes when you connect your phone to a device, you can turn the popup off. The mode defaults to **No data transfer**, for charging. And to change modes, you can use the notification or Settings app.

To turn off the popup:

1. With your phone connected to another device using your USB cable, go to **Settings** > **Connected devices** > **USB**.
2. Turn **Show popup to choose desired mode** off .

Cast screen or media to TV

Mirror with Chromecast

To mirror your screen on a TV, showing all apps and screens you use on your phone, you must:

- Use a TV with Chromecast built-in.
- Or, plug a Chromecast into your TV's HDMI port. (Learn how.)

To start casting:

1. Make sure your phone and Chromecast or TV with Chromecast are connected to the same Wi-Fi network.
2. Go to **Settings** > **Connected devices** > **Connection preferences** > **Cast**.

   Or, from quick settings, tap .
3. Tap the name of the Chromecast or TV to connect.

To stop:

- On the casting notification, tap > **Disconnect**.
- Or, from quick settings, tap > **Disconnect**.

Cast an app

You can cast an app if you:

- Have a smart TV that supports mobile apps for viewing or playing media from your phone. See your TV user guide for instructions to connect your phone.
- Have Chromecast or a TV with Chromecast built-in.

Miracast is not supported.

To cast an app:

1. Make sure your phone and smart TV or Chromecast are connected to the same Wi-Fi network.
2. In a cast-compatible app (like YouTube), tap .

   If you don't see or don't see your TV listed in the casting options, try these troubleshooting steps.

While casting:

- You'll see in the status bar.
- You can still make and receive calls and use your phone's other features.

To stop casting:

- In the app that's casting, tap and tap the option to disconnect.
- From the notification, tap .

Cast personal media with Wi-Fi Direct

If your TV supports Wi-Fi Direct, set up a connection between your phone and TV so that you can view or play media from your phone.

For information about using Wi-Fi Direct after you've connected, see the user guide that came with your TV.

Fix an issue

After each step, see if your issue is fixed.

Check the basics

1. If you're using a VPN, turn off the VPN and try again.
2. Make sure your phone and Chromecast or smart TV are connected to the same Wi-Fi network.
3. Move your phone to within 15 feet of your Chromecast or smart TV.
4. If you're using Chromecast or a TV with Chromecast built-in, check for updates to the Home app.

Phone can't find smart TV

First, check the basics. Then:

1. On the TV, open the app and start a video. Then on your phone, open the app and try casting to the TV again.
2. Link the app on your phone to the app on the TV:
   a. On your phone, open the app, open its settings, and look for options to watch on TV. (For example, **YouTube** > M > **Settings** > **Watch on TV** > **Link with TV code**.)
   b. Follow the app's onscreen instructions to complete setup.
3. Reboot your Wi-Fi router.
4. Check your TV for firmware and app updates. See the TV manufacturer's support website for information.
5. Check your TV manufacturer's support website to make sure the app is still supported on your TV model.

Check for app help

If you're having issues casting with one of these apps, check their help center for troubleshooting information:

- Netflix
- Amazon Prime Video
- YouTube
- Google TV

Print from your phone

Set up printing

To connect your printer and phone:

1. Before you begin:
   - If your printer is connected to a Wi-Fi network, be sure the phone and your printer are connected to the same network.
   - If your printer supports Wi-Fi Direct, set up a direct connection between the phone and printer.
2. Go to **Settings** > **Connected devices** > **Connection preferences** > **Printing**.
3. Touch **Default Print Service** to automatically find your printer.

   Once your printer is found, it is ready to print.

If your printer isn't found in Default Print Service:

1. Touch **Add service**.
2. In Play Store, search for “[printer brand] print service” and install the app for the printer's service plugin.
3. Once installed, return to **Settings** > **Connected devices** > **Connection preferences** > **Printing** and touch the print service plugin name to automatically find your printer.
4. If your printer isn't found automatically, touch > **Add printer** > .
5. Enter the printer's name and IP address (found in your printer settings on connected computer).

Print

1. Open the item to print, such as:
   - A photo in Photos
   - An email
   - A document in Drive
   - A web page in Chrome
2. Tap or > **Print**. (If you're using Chrome, > **Share** > **Print**.)
3. Select printer options if needed.
4. Tap .

Adjust screen brightness

To set your screen's brightness, open quick settings and slide .

Your phone automatically adjusts your screen to the light around you, with Adaptive brightness. When the feature is on, you can still fine tune the brightness in quick settings. To turn this feature off:

1. Go to **Settings** > **Display**.
2. Turn **Adaptive brightness** off.

Tips:

- If the lowest setting on the slider is still too bright, you can make the screen extra dim.
- If Adaptive brightness stops working as desired, you can reset it to retrain the system.

Use Dark theme

Give your eyes and battery a break by changing to a dark background.

When Dark theme is on:

- The dark background applies to your settings and apps.
- Colors don't change in media, such as videos.
- Not all apps support Dark theme. To change those apps to a dark background, in order to reduce eye strain while reading, use color inversion.

When it's off, if you run low on battery, Battery saver switches temporarily to the dark background until the phone has charged.

Turn it on or off

1. Go to **Settings** > **Display**.
2. Turn **Dark theme** on or off .

Tip: To add Dark theme to quick settings, open quick settings, tap , then drag the tile where you want it.

Set a schedule

1. Go to **Settings** > **Display** > **Dark theme**.
2. Tap **Schedule**, then select one:
   - To start and stop at specified times, tap **Turns on at custom time** and enter times.
   - To use from dusk to dawn, tap **Turns on from sunset to sunrise**.

Choose color mode

You can change the intensity of color on your screen for a realistic or enhanced look.

1. Go to **Settings** > **Display**.
2. Tap **Colors**.
3. Choose one:
   - To see the most accurate colors, tap **Natural**.
   - To see the most vivid colors, tap **Saturated**.
4. To change the color temperature:
   - Tap **Warm** or **Cool** for automatic adjustments.
   - Or, tap **Custom** and move the circle on the color wheel to the desired position.

   When Night Light is on, the color temperature you set will be overridden and will resume when you turn Night Light off.

Tips:

- If colors don't appear as you expect, troubleshoot the issue.
- If you're color blind, use color correction instead.

Change text and icon size

You can make the text or other items on your screen smaller or larger for your comfort and convenience. You can also make text appear bolder and increase contrast to see it better.

1. Go to **Settings** > **Display** > **Display size and text**.
2. Do any of the following:
   - To adjust only the size of text on the screen, drag **Font size** to the size you want.
   - To adjust the size of icons along with their labels, drag **Display size** to the size you want.
   - To make the text darker and heavier, turn **Bold text** on .
   - To make text stand out better against its background, turn **High contrast text** on . When it's on, a thin black line is added around white text, or a thin white line is added around black text.
3. To preview how the changes affect your icons and text, swipe the **Preview** window.

Undo your changes

To reset the display size and text to the original settings:

1. Go to **Settings** > **Display** > **Display size and text**.
2. Tap **Reset settings** > **Reset**.

If you need more help seeing the screen

Turn on accessibility features, like magnification to zoom in and out or a screen reader to hear audio descriptions of what you touch on the screen.

Adjust other font and display options

Touch & hold a blank space on your home screen, then tap **Personalize**.

Adjust refresh rate

The action you see on your screen is a series of frames strung together, like a movie. A higher display refresh rate shows more frames per second, making the action smoother and more responsive. This uses more battery power.

You can adjust the display refresh rate, depending on your needs:

- For the smoothest, most responsive display, use the highest refresh rate.
- To save battery power, use a lower rate.

Note: When Battery saver is on, the refresh rate is set to 60Hz.

To raise or lower the refresh rate:

1. Go to **Settings** > **Display**.
2. Tap **Display refresh rate**.
3. Select the rate.

Show apps full screen

By default, apps avoid the banded area across the front camera, but you can set your apps to use full screen and stretch across the entire display.

You can turn it on or off for individual apps or all apps.

1. Go to **Settings** > **Display** > **Full screen**.
2. Adjust the settings:
   - To adjust an individual app, next to the app's name, turn it on or off.
   - To adjust all apps, tap > **Turn on for all apps** or **Turn off for all apps**.
3. If you don't see the change or it doesn't display correctly, do either to close and restart the app:
   - Open recent apps and swipe it from the list, then reopen the app.
   - Restart the phone, then reopen the app.

If you're using an app and want to toggle full screen on or off, you can do it from the recent apps list:

1. Drag up from the bottom of the home screen, hold, then release.

   Or, tap if you're using 3-button navigation.
2. Tap the app's icon.
3. Tap **Full screen** to switch it on or off:
   - extends the app screen around the camera.
   - prevents the app from extending around the camera.

Stop automatic rotation

Prevent screen from rotating

Open quick settings and turn Auto-rotate off.

In this mode, you can manually rotate the current app. Turn your phone the direction you want, then touch in the corner.

Allow screen to rotate

To allow rotation for all apps, open quick settings and turn Auto-rotate on.

You can also adjust this in **Settings** > **Display** > **Auto-rotate screen**.

Adjust colors at night

If you selected a color mode, it will resume outside of night hours.

Automatically change screen to amber

Your phone can automatically filter out blue light and adjust screen colors to warmer tones at night, making it easier to view and read in dim light. You might even fall asleep more easily.

1. Go to **Settings** > **Display** > **Night Light**.
2. Touch **Schedule**, then:
   - To start and stop at specified times, touch **Turns on at custom time** and enter times.
   - To filter from dusk to dawn, touch **Turns on from sunset to sunrise**.

To adjust filter intensity, open quick settings, touch & hold , then use the slider to change the intensity of the amber filter.

Turn it off

To temporarily switch back to regular colors from amber, open quick settings and turn off Night Light.

To stop automatically changing to amber, select **Settings** > **Display** > **Night Light** > **Schedule** > **None**.

Automatically change screen to grayscale

To help you wind down at night, your phone can change to grayscale (black and white).

1. Go to **Settings** > **Digital Wellbeing & parental controls** > **Bedtime mode**.
2. Touch **Bedtime routine**, then set your schedule.
3. Touch **Customize** > **Screen options at bedtime**.
4. Turn **Grayscale** on .

Turn it off

To temporarily switch back to regular colors from grayscale, open quick settings and touch .

To stop automatically changing to grayscale at night, go to **Settings** > **Digital Wellbeing & parental controls** > **Bedtime mode** > **Customize** > **Screen options at bedtime** and turn **Grayscale** off .

Change screen timeout

Change when your screen turns off

1. Go to **Settings** > **Display**.
2. Touch **Screen timeout** and select the time of inactivity before your phone sleeps.

> **Tip:** Set a shorter time to extend battery life.

Change lock screen features

Use these options to control what content and features appear on your lock screen.

You can also control when your screen locks.

Turn Glance content off/on

Not all carriers and countries support this feature.

Glance provides quick access to a wide variety of information without having to unlock your screen.

Turn Glance off

To remove this content from your lock screen:

1. Go to **Settings** > **Home & lock screen** > **Lock screen** > **Glance**.

   Or, on your lock screen, tap the article title to open Glance, then tap > .

2. Turn it off.

Turn Glance on

1. Go to **Settings** > **Home & lock screen** > **Lock screen** > **Glance**.
2. Turn it on .

   You'll see notifications on your lock screen as a chip. Tap the chip to browse notifications.

Customize the content and other settings

Go to **Settings** > **Home & lock screen** > **Lock screen** > **Glance**.

Limit lock screen notifications

Control which notifications appear

You can turn off notifications for your lock screen, or choose between showing some or all content:

1. Go to **Settings** > **Home & lock screen**.
2. Tap **Lock screen** > **Privacy**.
3. Select whether or not to show notifications.

   If you show notifications but hide sensitive content, then you'll receive notifications for incoming emails or chats, but they won't include message details.

Make clock smaller

1. Go to **Settings** > **Home & lock screen** > **Lock screen**.
2. Turn **Double-line clock** off .

Add message to lock screen

To add your name or a short message to your lock screen for anyone who finds your phone:

1. Go to **Settings** > **Home & lock screen** > **Lock screen**.
2. Tap **Text on lock screen**.
3. Type the text to display and tap **Save**.

Tip: Don't put your mobile number as contact info on your lock screen unless you can access your voicemail from another device.

Set when screen turns on automatically

To control when the screen turns on automatically:

1. Go to **Settings** > **Home & lock screen** > **Lock screen**.
2. Adjust settings:
   - To turn the screen on when you pick up the phone, touch **Lift to check phone** and turn it on .
   - To turn the screen on when a new notification arrives, turn **New notifications** on .

Tap to turn screen on/off

To turn the screen on or off, press the Power button. You can also set up tapping gestures.

1. Go to **Settings** > **Gestures**.
2. Adjust settings:
   - To turn the screen on and go to the lock screen by tapping it *twice*, tap **Jump to lock screen** and turn **Use jump to lock screen** on or off.
   - To turn the screen off by tapping it *twice*, tap **Put display to sleep**, then turn it on.

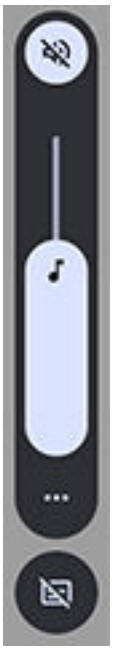
Adjust volumes

Use Volume buttons

In-call audio. When you're on a call, the Volume buttons control the volume of the other person.

Media. When you're not on a call, the Volume buttons control media volume during playback or before you listen.

Phone ringtone, notification sounds, and alarms. To adjust these volumes, press a Volume button and then use this shortcut on your home screen:



1. Slide to adjust media volume.
2. Tap to choose level for ringtone and notification sounds: on, silent, and vibration only.
3. Slide to adjust call volume.
4. Tap to see all volume controls (call, ring/notification, alarm, media).
5. Tap to turn captions on/off when speech is detected.

Silence with Power & Volume buttons

To silence a ringing phone, press either the **Power** button or the **Volume down** button.

Tip: Use Do Not Disturb to silence all calls, messages, events, and reminders. Turn it on from quick settings, or schedule it to turn on automatically during certain times or during calendar events.

Set ringtones

Change default call ringtone

1. Go to **Settings** > **Sound & vibration**.
2. Do one of the following:
   - If your phone has one SIM card, tap **Phone ringtone**.
   - If your phone has dual SIMs, tap the ringtone for the SIM you want to change.
3. Do one of the following:
   - Select a ringtone from the list.
   - To use a song as the ringtone, tap **Add ringtone** at the bottom of the list. Then tap ☰ > **Audio** and select the song stored on your phone.
   - For silence, tap **None** at the top of the list.

Set call ringtone for a contact

You can choose a unique ringtone for calls from specific people so you'll know instantly who's calling.

1. Open the **Contacts** app.
2. Tap the contact's name.
3. Swipe to move down and tap **Contact ringtone**.
4. Do one of the following:
   - Select a ringtone from the list.
   - To use a song as the ringtone, tap **Add ringtone** at the bottom of the list. Then tap ☰ to browse and select the song stored on your phone. Tap ⋮ to show internal storage.
   - For silence, tap **None** at the top of the list.

Change notification sound

You can modify the notification sound for all apps, or assign a distinctive sound to notifications from a specific app, replacing the default.

Set default notification sound

1. Go to **Settings** > **Sound & vibration** > **Default notification sound**.
2. Do one of the following:
   - To change it, choose a new sound.
   - To turn notification sounds off, select **None**.

Set notification sound for a specific app

1. Touch & hold the app icon.
2. Tap ⓘ > **Notifications**.
3. Tap the category for enabled notifications, then tap **Sound** and select a unique ringtone, or set it to none.

If you can't hear a notification

If an app's notifications are silent but you want to hear them:

1. Touch & hold a notification.
2. Tap **Default**.

To let an app's notifications be heard when Do Not Disturb is on:

1. Touch & hold the app icon.
2. Tap ⓘ > **Notifications**.
3. Tap the category for enabled notifications and turn **Override Do Not Disturb** on.

Change alarm sound/music

1. Open the Clock app.
2. On the tab, tap by the alarm.
3. Tap and choose what to play:
   - To use a ringtone on your phone, select one.
   - To wake to a music app like Spotify, select the app and choose the music.

Get more ringtones

Although your phone comes with lots of ringtones, you can get more:

- Search for “ringtones” in Play Store and install an app that provide ringtones.
- Search for “ringtone maker” in Play Store and install an app that lets you create custom ringtones. Open the app and use it to select entire songs or portions of songs.
- If you have songs that are .mp3 files stored on your computer, connect your phone and computer with a USB cable, then copy the song to your phone.

Fix an issue

If you're not hearing your ringtones:

- Look for ⛔ in your status bar, which means you're in Do Not Disturb mode. Open quick settings and turn ⊖ Do Not Disturb off.
- Check that your ringtone volume is set to 🔊.

Change vibration settings

Turn all vibration on/off

Turning vibration off is a good way to extend battery life when you need to.

To control overall phone vibration (calls, notifications, keyboard interactions) with one on/off switch:

1. Go to **Settings** > **Sound & vibration** > **Vibration & haptics**.
2. Turn **Use vibration & haptics** on or off.

Set call vibration

Prevent your phone from vibrating for calls

1. Go to **Settings** > **Sound & vibration**.
2. Tap **Vibration & haptics**.
3. Under Calls, slide **Ring vibration** to stop vibration.

Make your phone vibrate for calls

1. Go to **Settings** > **Sound & vibration**.
2. Tap **Vibration & haptics** and check that **Use vibration & haptics** is on.
3. For incoming calls, turn **Ring vibration** on. Optionally, turn **Vibrate first then ring gradually** on.

Set notification vibration

1. Go to **Settings** > **Sound & vibration**.
2. Tap **Vibration & haptics** and check that **Use vibration & haptics** is on.
3. Under Notifications and alarms, turn **Notification vibration** on or off.

Control alarm vibration

Turn vibration on/off for one alarm

1. In the Clock app, tap by the alarm.
2. Check or uncheck **Vibrate**.

Turn vibration off for all alarms

1. Go to **Settings** > **Sound & vibration**.
2. Tap **Vibration & haptics** and check that **Use vibration & haptics** is on.

3. Under Notifications and alarms, turn **Alarm vibration** off .

   This overrides the vibration setting for individual alarms.

If you don't feel vibration and expect to

1. Go to **Settings** > **Sound & vibration**.
2. Tap **Vibration & haptics** and check that **Use vibration & haptics** is on .
3. Under Notifications and alarms, turn **Alarm vibration** on .

Enhance sound

About Dolby Atmos

Dolby Atmos delivers a premium listening experience through your phone's loudspeaker and connected devices.

Smart audio automatically chooses the best settings for the media you're listening to, or you can set and customize sound profiles for the loudspeaker and connected devices.

Set sound profile for headphones or connected device

You can select a preset sound profile for your headphones or other connected device, and your phone will remember the next time you connect it.

1. Open quick settings, then touch & hold .

   Or, open the Dolby Atmos app.

2. Tap **Settings**.
3. Choose how to adjust sound:
   - For a 3-D audio environment that simulates sounds coming from multiple directions to give you a sense of height, depth, and movement, select **Spatial audio**.
   - To automatically adjust based on the media playing, select **Smart audio**.
   - To use a preset sound profile, select **Music**, **Movie**, **Game**, or **Podcast**.
   - To use a custom sound profile where you can adjust a graphic equalizer, select **Custom**.
4. To customize a selected sound profile, next to the profile name tap , then:
   - Choose an equalizer preset to enhance treble, bass, or vocals.
   - To keep the same volume level when you switch between audio sources, turn **Volume leveler** on.
   - To learn more about these settings, touch > **Help**.
   - To revert a profile to its original settings, tap > **Reset**.
   - To revert to all original settings, on the main Dolby Atmos screen, tap **Settings** > > **Reset settings**.

Turn Dolby Atmos off

To turn Dolby Atmos off for headphones or another connected device:

1. Connect your headphones or other audio device.
2. Go to **Settings** > **Sound & vibration** > **Dolby Atmos**.
3. Turn it off .

To turn it off when you're listening through the loudspeaker:

1. Go to **Settings** > **Sound & vibration** > **Dolby Atmos**.

2. Tap > **About**.
3. Tap the version listed three times to add the on/off switch.
4. Turn it off .

Silence calls & notifications

When you're busy, use Do Not Disturb to mute ringtones for incoming calls, stop vibration, and block notifications.

Quickly turn Do Not Disturb on or off

Turn it on

1. Open quick settings and tap ⊖.

   You'll see ⊖ in the status bar when Do Not Disturb is on.

2. To change how long it stays on, in quick settings, touch & hold ⊖, tap **Duration for Quick Settings**, and then choose one:
   - To keep it on indefinitely, tap **Until you turn off**.
   - To select a duration, tap **For 1 hour**, then tap + or - to adjust the time.
   - To choose each time you turn Do Not Disturb on, tap **Ask every time**.

Turn it off

Open quick settings and tap ⊖.

If it's turning itself on again, but you don't want it to:

- Make sure you're not automatically silencing on a schedule or during calendar events.
- If you're using Bedtime mode, tap **Settings** > **Digital Wellbeing & parental controls** > **Bedtime mode** > **Customize** and turn **Do not Disturb for Bedtime mode** off.

Silence automatically

Your phone can automatically switch into and out of Do Not Disturb mode, either based on your calendar events or on a schedule you create.

Silence during calendar events

1. Open quick settings, then touch & hold ⊖.
2. Tap **Schedules**.
3. Turn **Event** on.
4. To select the calendar to use and choose events based on your reply status, tap **Event**.

Silence using a schedule

1. Open quick settings, then touch & hold ⊖.
2. Tap **Schedules**.

3. Adjust settings:
   - To use an existing schedule, tap its name, like **Sleeping**.
   - To create a new one, tap **Add more**. Tap **Time**, then enter a name and tap **Add**. Specify its days, start and end times, and level of silence.

Stop automatic silencing

If you don't want your phone to switch automatically into and out of Do Not Disturb:

1. Open quick settings, then touch & hold .
2. Tap **Schedules**.
3. To stop silencing based on your calendar, turn **Event** off .
4. To stop silencing based on a schedule:
   - To use the schedule later, turn it off.
   - To delete a schedule, tap its name, then tap . You can only delete schedules you created.
   - To delete multiple schedules, tap > **Delete schedules**.

Choose what can interrupt

You can choose which interruptions to allow when Do Not Disturb is on.

Choose interruptions by People

1. Go to **Settings** > **Sound & vibration** > **Do Not Disturb**.

   Or, in quick settings, touch & hold .
2. Tap **People**.
3. Choose what and who to allow.
   - **Calls**: Allow calls from starred contacts, other contacts, all callers, or none. You can also allow calls if the same person calls twice in 15 minutes; turn **Allow repeat callers** on .
   - **Messages**: Allow messages from starred contacts, other contacts, anyone, or none.

Choose interruptions by Apps

1. Go to **Settings** > **Sound & vibration** > **Do Not Disturb**.

   Or, in quick settings, touch & hold .
2. Tap **Apps**.
3. Tap .
4. Tap the app to allow, and set notifications to allow .

   You'll see selected apps under APPS THAT CAN INTERRUPT. To change which notifications can interrupt, tap the app in the list.

Allow alarms and other interruptions

Alarms and media sounds are allowed by default, but you can turn them off. You can also allow touch sounds, reminders, and calendar events to send notifications.

1. Go to **Settings** > **Sound & vibration** > **Do Not Disturb**.

   Or, in quick settings, touch & hold ⊖.

2. Tap **Alarms & other interruptions**.

3. Turn interruptions on or off .

Stop phone from speaking

Silence replies to voice commands

Some voice commands (like “What's up?” and “What is the current weather?”) cause Google Assistant to speak in response.

To quickly silence a voice command response, tap .

To have your phone show responses to voice commands on screen and not speak them:

1. Open the **Google** app.
2. Tap your profile icon > **Settings**.
3. Tap **Voice** and turn off speech output.

Turn off screen reader

If your phone describes everything you touch on screen, speaking your notifications, and reading messages aloud, you might have turned on a screen reader. This accessibility feature helps people with visual impairments.

To turn it off:

1. Press & hold both Volume Up and Down buttons for three seconds. If TalkBack was reading the screen, this pauses readout so you can update settings more easily.
2. Go to **Settings** > **Accessibility**.
3. Turn off all screen readers, such as TalkBack or Select to Speak.

Turn off charging sounds

If you don’t want your phone to make a sound when it comes in contact with a charger:

1. Go to **Settings** > **Sound & vibration**.
2. Turn off **Charging sounds and vibration**.

Turn touch sounds on/off

1. Go to **Settings** > **Sound & vibration**.
2. Do any of the following:
   - To hear a tone when you dial a number, turn on **Dial pad tones**.
   - To hear a click when you lock or unlock the screen, turn on **Screen locking sound**.
   - To hear a click when you touch something on the screen, turn on **Tap & click sounds**.

If you don't want any of these sounds, just turn them off .

Hear other notification sounds

You can assign a ringtone for notifications from specific apps.

You can also control sounds that notify you of other events:

1. Go to **Settings** > **Sound & vibration**.
2. To hear a confirmation tone and feel a vibration when you successfully connect your phone to a charger, turn **Charging sounds and vibration** on .
3. To feel a vibration when you make a call and the other party answers, tap **Vibration & haptics** and turn **Vibrate for answered calls** on .

If you don't want any of these sounds, just turn them off .

Turn notifications on/off

Turn off app notifications

When you receive unwanted notifications from an app, touch & hold the notification, then tap **Turn off notifications**.

To review all apps and adjust whether they can send notifications:

1. Go to **Settings** > **Notifications**.
2. Tap **App notifications**.
3. Do one of the following:
   - To stop all notifications from an app, turn it off.
   - To stop certain notifications from an app, tap the app name, then turn notifications or off for each category.
   - To stop an app from showing notifications as a banner across the top of an unlocked screen, like those for incoming calls, tap the app name, (if needed, tap the notification type), then turn **Pop on screen** off for the category.

Tip: To prevent notifications from all apps during certain times or calendar events, use Do Not Disturb.

Turn on app notifications

If an app isn't sending notifications but you want it to:

1. Go to **Settings** > **Notifications**.
2. Tap **App notifications**.
3. At the top, tap and select **Turned off**.
4. Turn notifications on as needed.

Choose how notifications look and open

Turn notification dots off/on

App icons show dots to alert you about unread notifications. You can turn off dots for one or all apps.

Turn dots off for all apps

1. Go to **Settings** > **Notifications**.
2. Turn **Notification dot on app icon** off or on .

Turn dots off for one app

1. Touch & hold the app icon.
2. Tap > **Notifications**.
3. Turn **Allow notification dot** off or on .

Turn bubbles off/on for messaging

Bubbles keep your conversations accessible by floating on top of other apps. Read and send messages from the bubble without opening the app. You can turn bubbles off if you want to always see conversations in their full app.

1. Go to **Settings** > **Notifications** > **Bubbles**.
2. Turn **Allow apps to show bubbles** off or on .

Turn off/on for specific app or conversation

1. Go to **Settings** > **Apps** > **All apps**.
2. Tap the app to change.
3. Tap **Notifications** > **Additional settings in the app** > **Bubbles**.

   If you don't see Bubbles, then the app doesn't support this feature.
4. Adjust settings to specify whether some or all conversations can bubble, or nothing should bubble (all conversations open in the full messaging app).

Turn on snoozing

If you want to be able to snooze your notifications, turn on snoozing:

1. Go to **Settings** > **Notifications**.
2. Turn **Allow notification snoozing** on .

Allow notifications to open apps in freeform

In addition to the sidebar, you can set apps to open in freeform mode from your notifications.

1. Go to **Settings** > **Gestures** > **Sidebar**.
2. Tap at the bottom of the screen, then tap (More settings) at top.
3. Turn **Open notifications in freeform** on ,

Control notification lights

You can set your phone to flash your camera light, your screen, or both when you receive a notification (including calls) or an alarm sounds.

1. Go to **Settings** > **Notifications** > **Flash notifications**.
2. To flash the camera light, turn **Camera flash** on .

   You can't change the color of the camera light.
3. To light up the screen, turn **Screen flash** on . If you want to change the color:

   a. Tap **Screen flash** and select a color.

   b. Tap **Preview** to test your selection or **Done** to save.

Interaction with Do Not Disturb

If you turn on Do Not Disturb to temporarily silence notifications, the lights will stay dark as well. When you see in the status bar, Do Not Disturb is on and your lights won't flash.

Control notification sound

Change notification volume

To adjust the volume level of all notifications:

1. Press a Volume button and on the screen tap •••.
2. Adjust the **Notification volume** slider.

Change notification sound

You can modify the notification sound for all apps, or assign a distinctive sound to notifications from a specific app, replacing the default.

Set default notification sound

1. Go to **Settings** > **Sound & vibration** > **Default notification sound**.
2. Do one of the following:
   - To change it, choose a new sound.
   - To turn notification sounds off, select **None**.

Set notification sound for a specific app

1. Touch & hold the app icon.
2. Tap ⓘ > **Notifications**.
3. Tap the category for enabled notifications, then tap **Sound** and select a unique ringtone, or set it to none.

If you can't hear a notification

If an app's notifications are silent but you want to hear them:

1. Touch & hold a notification.
2. Tap **Default**.

To let an app's notifications be heard when Do Not Disturb is on:

1. Touch & hold the app icon.
2. Tap ⓘ > **Notifications**.
3. Tap the category for enabled notifications and turn **Override Do Not Disturb** on.

Silence an app's notifications

To temporarily silence notifications from **all** apps, use Do Not Disturb.

Change to Silent

If you want an app's notifications to be less intrusive, you can categorize them:

- **Default**: You'll hear a sound and feel vibration (if on), get a message on your lock screen, and can see the app's icon in your status bar.
- **Silent**: You won't hear a sound or feel a vibration. The notification icon will still show in the status bar, unless you hide them.

Option 1: On a notification

1. Touch & hold a notification.
2. Tap **Silent**.

Option 2: In Settings

1. Go to **Settings** > **Notifications** > **App notifications**, and select the app.
2. Tap the type of notification to change.
3. Tap **Silent**.

Hide silent notifications

1. Go to **Settings** > **Sound & vibration** > **Do Not Disturb**.

   Or, in quick settings, touch & hold ⊖.
2. Tap **Display options for hidden notifications**.
3. Select what to allow or block:
   - **No sound from notifications**: You will see notifications in the pull-down list of all notifications but won’t hear their sound.
   - **No visuals or sound from notifications**: You won’t see or hear notifications.
   - **Custom**: Start with not seeing or hearing notifications, and make small adjustments, like allowing notification dots on app icons.

Hide status bar icons for silent notifications

To hide the icons for silent notifications from **all** apps:

1. Go to **Settings** > **Notifications**.
2. Turn **Hide silent notifications in status bar** on ●.
3. Restart the phone to apply the new settings.

   You won't see the icon in the status bar for any silent notifications. When you swipe the status bar down, the icon appears in the pull-down along with the notification.

Tip: To hide status bar icons for a single app, open the app and look in its settings. Only some apps let you do this.

Manage notification privacy

Control which apps read your notifications

Some apps need to access notifications from other apps to work properly. For example, a smart driving companion app needs to access notifications from other apps in order to read them aloud when you're driving.

Be sure that apps with access to your notifications have legitimate reasons, because with this access they can:

- Read all notifications, including personal information like contact names and text messages
- Dismiss notifications
- Answer calls
- Turn **Do Not Disturb** on or off

Check which apps can read your notifications

1. Go to **Settings** > **Notifications** > **Device & app notifications**.
2. Under **Allowed**, review the list of apps.
3. Tap an app to see which notifications it can access:
   - Real-time communication from apps in use, including navigation and calls
   - Conversations, like text messages and chats
   - Notifications with sound and vibration
   - Silent notifications

Stop app from reading notifications

1. Go to **Settings** > **Notifications** > **Device & app notifications**.
2. Under **Allowed**, tap the app name.
3. Choose one:
   - To stop it from reading certain types of notifications, unmark checkboxes.
   - To stop it from reading any notifications, turn **Allow notification access** off, then tap **Turn off**.

If you restrict an app's access to notifications and then find the app isn't working properly, you can restore access.

Allow app to read notifications

1. Go to **Settings** > **Notifications** > **Device & app notifications**.
2. Under **Not allowed**, tap the app name.
3. Turn **Allow notification access** on, and tap **Allow**.
4. Adjust checkmarks if you want to stop it from reading certain types of notifications.

Control lock screen notifications

If you've set a pattern, PIN or password, you can control which type of notifications show on your lock screen and prevent them from revealing private information.

To adjust notifications for all apps:

1. Go to **Settings** > **Notifications**.
2. To hide sensitive content on your lock screen, turn **Sensitive notifications** off.

   You'll get lock screen notifications for an incoming email or chat, but they won't include message details.

   For finer control, leave this on to allow details, and instead hide sensitive content from specific apps.
3. To change which notifications show on your lock screen (show all, hide notifications from apps you silenced, or hide all), tap **Notifications on lock screen**.

To hide sensitive content from specific apps:

1. Set lock screen notifications for all apps to **Show conversations, default, and silent**.
2. Touch & hold the app icon, then tap > **Notifications**.
3. Types of notifications the app sends appear here. For each enabled notification that you want to hide:
   a. Tap the name.
   b. Tap **Lock screen** > **Show sensitive content only when unlocked**.

Tip: When you turn on Lockdown, notifications won't show on your lock screen.

See previously viewed notifications

After you clear or snooze notifications, you can go to your notification history to view them again.

To set it up:

1. Go to **Settings** > **Notifications**.
2. Tap **Notification history**.
3. Turn **Use notification history** on .

To see the history, go to **Settings** > **Notifications** > **Notification history**.

Change Navigation mode

You can choose how to move between apps and screens:

1. Go to **Settings** > **Gestures**.
2. Tap **Navigation mode**.
3. Choose an option:
   - **Gesture navigation**: Use drag and swipe gestures to return to your home screen, to switch apps, or to go back to the previous screen. Learn more about gestures.
   - **3-button navigation**: Use the back ◀, home ●, and recent ■ buttons. Learn more.

Set options for Gesture navigation

You can choose if the navigation bar appears at the bottom of the screen and how certain gestures work.

Show or hide navigation bar

If you don't want to see the navigation bar at the bottom of the screen, you can hide it. You can show it again any time.

1. Go to **Settings** > **Gestures** > **Navigation mode**.
2. Next to Gesture navigation, tap ⚙.
3. Under Navigation bar, select whether to **Show** or **Hide** it.

Adjust sensitivity of back gesture

To adjust sensitivity of the back navigation gesture:

1. Go to **Settings** > **Gestures** > **Navigation mode**.
2. Next to Gesture navigation, tap ⚙.
3. Under Back Sensitivity, move the sliders to adjust sensitivity for the left and right edges.

   If you have apps that include gestures along the edges of the screen, setting a higher sensitivity here might conflict with them.

Disable or enable swipe for Google Assistant

To start a voice command with Google Assistant, swipe from the bottom corner. If this gesture conflicts with another you use, you can turn it off.

1. Go to **Settings** > **Gestures** > **Navigation mode**.
2. Next to Gesture navigation, tap ⚙.
3. Turn **Swipe to invoke assistant** off or on.

Set options for 3-button navigation

To start a voice command with Google Assistant, press & hold the home button. You can turn this gesture on or off any time.

1. Go to **Settings** > **Gestures** > **Navigation mode**.
2. Next to 3-button navigation, tap .
3. Turn **Hold Home for Assistant** on or off .

Set up sidebar for easy multitasking

Use the sidebar to open favorite apps and features in small, freeform windows that you can move and resize. Or, open them in full screen.

Turn on the sidebar

1. Go to **Settings** > **Gestures**.
2. Tap **Sidebar** and turn **Use sidebar** on .

   You'll see a sidebar on the right edge of your screen. Swipe it in to see a menu of apps that you can open.

Customize the sidebar

Change apps in sidebar

1. On the sidebar, tap .

   Or, go to **Settings** > **Gestures** > **Sidebar** > .

2. Tap **Customize the sidebar**.
3. Customize the menu:
   - To rearrange apps, touch & hold an app, then drag it.
   - To remove an app, tap ⛔ or unmark its checkbox.
   - To add an app, tap it or mark its checkbox.
   - Tap ⚙ again to choose how apps open from the sidebar.

Change how apps open

For easy multitasking, set apps to open in resizable freeform windows you can drag around the screen, or set them to open in full screen.

1. On the sidebar, tap ⚙.

   Or, go to **Settings** > **Gestures** > **Sidebar** > ⚙.

2. Tap ⚙ > **Open apps**.
3. Select whether to open them **In freeform** or **In full screen**.

When you're using apps:

- To see an app in a different mode (freeform or full screen), drag it from the sidebar to the center of the screen.
- To see an app in split screen, drag it to the top or bottom of the screen.

Allow notifications to open apps in freeform

In addition to the sidebar, you can set apps to open in freeform mode from your notifications.

1. Go to **Settings** > **Gestures** > **Sidebar**.
2. Tap ⚙ at the bottom of the screen, then tap ⚙ (More settings) at top.
3. Turn **Open notifications in freeform** on ⬬,

About the Gametime sidebar

If you use Gametime, it has its own sidebar menu that opens apps. You set up the apps for that menu separately.

Use one-handed mode

Want to use one thumb to navigate your phone? Turn on One-handed mode.

This mode is only available if you're using Gesture navigation.

Set it up

1. Go to **Settings** > **Gestures**.
2. Tap **One-handed mode** and turn it on .
3. Choose what should happen when you swipe down:
   - To move the top of the screen into reach of your thumb, select **Pull screen into reach**.
   - To see your notifications and quick settings, touch **Show notifications**.
4. To add , which you can touch instead of swiping down, turn **One-handed mode shortcut** on .

Use it

Move top of screen down where your thumb can reach

Swipe down near the bottom edge of the screen. Or tap if you turned on the shortcut.

To exit this view:

- Swipe up from the bottom of the screen
- Tap anywhere above the app
- Tap

See your notifications and quick settings

To see notifications and quick settings, swipe down from the bottom edge of the phone *once* or tap *once*.

To see all quick settings, swipe down from the bottom edge of the phone *twice* or tap *twice*.

Turn it off or remove

If you want to remove but still be able to swipe down near the bottom edge of the screen, go to **Settings** > **Gestures** > **One-handed mode** and turn **One-handed mode shortcut** off.

To turn off the gesture and remove :

1. Go to **Settings** > **Gestures**.
2. Tap **One-handed mode** and turn it off.

Adjust screenshot settings

You can adjust settings for capturing screenshots at any time.

1. Go to **Settings** > **Gestures**.
2. Do any of the following:
   - Turn **Use Three finger screenshot** on or off .
   - To prevent the three finger gesture from working in certain apps, tap **Settings** > **Exceptions** > and select the apps.

Customize Power button gesture

You can customize the Power button, controlling what happens when you press it twice and when you press & hold it.

Choose what happens when you press Power twice

1. Go to **Settings** > **Gestures**.
2. Tap **Double press power key**.
3. Choose if you want to open the camera or if you don't want anything to happen (**None**).

Choose what happens when you press & hold Power

1. Go to **Settings** > **Gestures**.
2. Tap **Press & hold power button**.
3. Choose what you want the gesture to do:
   - To start a voice command, select **Digital assistant**.
   - To see the Power menu for turning off or restarting the phone, or going into Lockdown mode or Emergency mode, select **Power menu**.

   If you select a choice other than **Power menu**, then to see the Power menu for turning off and restarting, you'll need to press the **Power** + **Volume up** buttons simultaneously.
4. To adjust how long you need to press & hold to start the selected action, move **Press & hold duration**.

Turn flashlight on and off

To turn your flashlight on or off:

- Open quick settings and tap .
- Or, make a chopping motion.

To control the chop gesture:

1. Go to **Settings** > **Gestures**.
2. Tap **Fast flashlight** and turn it on or off.

Charge phone

Some apps and features use more power than others. So, depending on what you use, the amount of time before you need to charge will vary.

How to charge

Your phone doesn't support wireless charging. Use a USB charger or connect it to a power source with a USB cable.

Connect to charger

1. Connect your phone to the charger that came with your phone, or to a charger that is compatible with your phone.

   Other chargers, including laptops, can charge more slowly.

2. Insert the plug into an electrical outlet.

See if your phone is charging

When the phone is off and charging, you'll see the outline of a battery and a percentage. If the battery is completely discharged, this will not appear until the phone has received the minimum voltage required to boot.

When the phone is on and charging, you'll see in the status bar.

Tips for charging phone

- You can use your phone while charging. To charge faster, don't use your phone while charging.
- If you can't turn the phone on while it's charging, wait until it receives enough voltage before turning it on.
- When the battery gets low, the phone sends a notification.
- Use Battery saver mode when the battery is low.
- You can turn off charging sounds.

Manage how apps use battery

If one or a few of your apps aren't working correctly, you can adjust battery settings to see if that resolves the app issues. Otherwise, these settings extend battery life and should be kept on .

Change app optimization settings

When you're not using your phone, it reduces apps' background processes so that it stays in a low-power state and extends battery life.

You can make exceptions for an app, allowing it to use more power in order to run in the background and keep you current.

For best battery life, keep these on .

To adjust an app's settings:

1. Go to **Settings** > **Battery** > **App standby optimizer**.
2. Select the app.
3. Turn **App optimized** off and make changes:
   - To allow background data when the screen is *on*, tap **Standby wakeup optimization** > **No Optimize**. Or, to balance app performance and battery life, select **Auto**.
   - To allow background data when the screen is *off*, tap **Standby sleep optimization** > **No Optimize**. Or, to balance app performance and battery life, select **Auto**.
   - To allow background data when the phone is connected to a mobile network, tap **Standby network data** > **No Optimize**.

Control if apps open automatically

To reduce battery usage, your phone prevents apps from automatically starting when you turn on the phone or when other apps want to use them (secondary launch).

To allow apps to start automatically:

1. Go to **Settings** > **Battery** > **Auto launch management**.
2. To adjust which apps can automatically start when you turn on your phone:
   a. Tap **App auto launch**.
   b. Select which apps to allow.
3. To adjust which apps can start if another app needs to use it:
   a. Tap **App secondary launch**.
   b. Select which apps should be able to be opened by others.

Check for power intensive apps

1. Go to **Settings** > **Battery**.

2. Tap **Power intensive apps**.

   Your phone scans for any power-intensive apps and lists them. Apps appear in this list if they frequently:

   - Wake the screen
   - Use GPS
   - Keep the phone unlocked and out of sleep mode for a long time

3. If you see any apps listed as power-intensive:

   - Turn off unnecessary notifications or reduce their frequency.
   - Change **App optimized** settings to minimize the app's background activity.
   - Change **App optimized** settings to restrict background data usage for apps that don't need constant connectivity.
   - Consider uninstalling or replacing poorly optimized apps with more efficient alternatives.
   - Check for app updates and for updates to your Android operating system to take advantage of performance improvements and bug fixes.

Extend battery life

Choose settings that use less battery

To get the most life from your battery:

- **Connections:** Turn off Bluetooth and GPS when you're not using them.
- **Wi-Fi:** Turn on Wi-Fi when the phone is in a location with Wi-Fi coverage.
- **Screen:** Turn down screen brightness, change to Dark theme, and set a shorter screen timeout.
- **Sync:** If you don't need it, turn off automatic syncing for all accounts. This means you won't receive notifications when updates occur and you'll need to manually sync to get new emails.

Temporarily conserve battery power

Use Battery saver mode to keep going on a low battery.

Also, avoid these battery-intensive activities until you can charge:

- Recording or watching videos
- Listening to music
- Taking pictures
- Using Live (animated) wallpaper

See what's using your battery

To see if a specific app or service is draining your battery:

1. Go to **Settings** > **Battery** > ⋮ > **Battery usage**.
2. Tap ⋮ > **Show full device usage**.
3. Swipe up to view the list of apps and features using power since the last full charge.
4. Tap the app or feature using a lot of power.
5. Tap options for managing power usage.

Keep adaptive battery on

When you keep adaptive battery on, infrequently used apps will run less when you're not using them. Your phone will learn how you use apps over time and adjust for best battery life.

1. Go to **Settings** > **Battery** > **Adaptive Battery**.
2. Turn **Use Adaptive Battery** on .

Use Battery saver

Battery saver helps extend battery life until your next charge. Your phone can prompt you to activate it when the battery is low, or you can enable it anytime. Choose between Standard battery saver and Maximum battery saver.

When Battery saver is on

When the phone is in Battery saver mode, you'll see in the status bar.

Standard battery saver

When you use Standard battery saver, your phone will:

- Turn on Dark theme (You can turn it off, but that uses more battery.)
- Turn off Live Caption
- Wait until you use an app to refresh its content, like email or news
- Stop apps from doing things in the background (like listening for you to say “Hey Google”)
- Stop using Location services when your screen is off

Maximum battery saver

Maximum battery saver makes the same adjustments to your phone as Standard battery saver, and more.

Maximum battery saver will pause all apps and their notifications, except for these essential apps:

- Clock
- Messages
- Settings

You can assign other apps to be essential. For all other (non-essential) apps, the icons appear gray, and you can't use them until you switch to Standard battery saver or turn Battery saver off.

Maximum battery saver will also:

- Disable gestures for controlling your phone
- Disable live wallpapers
- Turn off work profile
- Stop tethering and turn off hotspot
- Stop Wi-Fi and Bluetooth scanning
- Set screen timeout to 15 seconds

Turn Battery saver on/off

Battery saver turns off while your phone is charging. It turns back on when you unplug the phone.

Turn Battery saver on/off manually

Open quick settings and tap to turn Battery saver on/off.

Turn Battery saver on automatically

You can turn Battery saver on automatically when it reaches a specific percentage. Or you can let AI learn your behavior and limit background apps when your phone is inactive.

1. Open quick settings, then touch & hold .
2. Tap **Schedule and reminders**.
3. To specify a percentage:
   a. Turn **Set default battery level** on .
   b. Move the slider to adjust the percentage when Battery saver switches on.
4. To let AI limit background apps, turn **Reduce battery drain when inactive** on .

Tip: Battery saver turns off while your phone is charging. It turns back on when you unplug the phone.

Let it turn off when your phone is charged

To prevent your phone from turning Battery saver on before you need it, you can set it to turn off when your phone is charged to 90% or above:

1. Open quick settings, then touch & hold .
2. Make sure **Turn off at 90%** is on .

Use Standard battery saver or Maximum battery saver

To see which type of battery saver you're using, open quick settings and look for the label on the Battery saver tile .

Switch between Standard battery saver and Maximum battery saver

To switch:

1. Open quick settings, then touch & hold .
2. Be sure Battery saver is on .
3. Select one:
   - **Standard battery saver**
   - **Maximum battery saver**

Adjust settings for Maximum battery saver

To adjust how Maximum battery saver works:

1. Open quick settings, then touch & hold .
2. Next to **Maximum battery saver**, tap .
3. Adjust settings:
   - To optimize battery savings based on how you're using the phone (device workload and temperatures), turn **Adaptive performance** on . This will lower screen brightness, adjust CPU freqency, and turn on low power mode as needed.
   - 5G uses more battery than 4G. If 5G isn't essential, enable **Turn off 5G** to restrict it until you switch to **Standard battery saver** or turn **Battery saver** off .
   - Essential apps will always run. Non-essential apps are greyed out, so you can't open then, and you won't get notifications. You can add apps to the list of essential apps. However, this degrades battery savings. Beside an app, tap to move it to **Essential apps**, or tap to move it to non-essential apps.

Turn low-battery reminders on/off

1. Open quick settings, then touch & hold .
2. Tap **Schedule and reminders**.
3. Turn **Battery saver reminders** on or off .

Show battery percentage in status bar

To show the percentage of battery power remaining in the status bar:

1. Go to **Settings** > **Battery**.
2. Turn **Battery percentage** on .

About storage options

Phone internal storage

You can store photos, videos, music, and applications on your phone. Files you downloaded from the internet and attachments you save from email or text messages are stored there, too.

You can free up space when needed.

SD card storage

You can store media files on an SD card. Just insert the card and move your files from phone storage to the SD card.

Benefits include:

- Immediate access to your files
- No cellular data or internet connection required to access files
- More control over privacy

Cloud storage

Clouds are great for storing files, like photos, videos, and music, you want to share and access from other devices.

Benefits include:

- Access your files from any device with an internet connection
- File synchronization - no need to keep track of multiple versions in multiple storage locations
- Backups of photos and videos available if phone is lost or damaged

Cloud storage providers typically offer free storage that can be expanded with a paid subscription once you reach the free-storage limit. Or you can manage your free storage by removing files you no longer need to make space for new ones.

Apps like Drive and Photos let you easily back up media to cloud storage.

Manage phone storage

Free up space by scanning

To scan your phone for old and unused items to remove, like downloads and unused apps:

1. Open the **Files** app.
2. Tap ☰ > **Clean**.

   You'll see suggestions for categories of items to check and free up space.
3. Tap the suggestions and follow onscreen instructions to uninstall, move, or delete items.

If you don't see suggestions to free up space, check that suggestions are on:

1. Open the **Files** app.
2. Tap ☰ > **Settings**.
3. Tap **Notifications** and turn on ones you want to receive.

Free up space manually

To free up space:

1. Open the **Files** app.
2. Tap a category (apps, images, videos, etc.) to view that type of item.
3. Do any of the following:
   - To uninstall apps, tap the app's name, then tap **Uninstall**.
   - To clear an app's cache, tap the app's name, then tap **Storage & cache** > **Clear cache**.
   - To clear your data for an app, tap the app's name, then tap **Storage & cache** > **Clear storage**.
   - To delete media or other files, touch & hold to select one or more items, then tap 🗑.

Temporarily turn off RAM boost

When you have extra storage space, **RAM boost** converts it to virtual memory to improve phone performance. If you're running low on storage space, you can turn off RAM boost temporarily, until you clear enough space on your phone.

Schedule automatic removal of photos and videos

If you automatically back up your photos and videos, you can automatically remove copies from your phone's internal storage after 30, 60, or 90 days.

1. Go to **Settings** > **Storage**.
2. If you installed an SD card, tap ▾ > **This device**.
3. Tap **Storage manager** and turn it on .
4. Tap **Remove photos & videos** and select a duration.

If you store photos or videos on your SD card, this does not delete them.

Manage SD card

Move photos, videos, music to SD card

To free up internal storage on your phone:

1. Be sure you've inserted and set up your SD card.
2. Open the **Files** app and tap ☰ > **Clean**.

   Or, go to **Settings** > **Storage**, then tap ▾ > **This device** > **Free up space**.
3. If there are media files to move, tap the option to free up space.
4. Select items to move.
5. Tap ⋮ > **Move to** > **SD card**.

Tip: You can set the camera to store all new photos and videos on the SD card.

Move apps to SD card

You cannot store apps on the SD card because it is portable storage. If needed, you can free up space on your phone.

Eject SD card

Drag the SD card notification down, and tap **Eject**.

If you don't see the notification:

1. Go to **Settings** > **Storage**.
2. Tap ▾ and select your SD card.
3. Tap ⋮ > **Eject**.

It's now safe to remove the card from the phone.

To insert the card into another device (computer, projector, etc.) that uses different card dimensions, you may need the adapter that came with your card. See device manufacturer's instructions for the type of adapter required and insertion instructions.

Erase SD card

1. Go to **Settings** > **Storage**.
2. Tap ▾ and select your SD card.
3. Tap ⋮ > **Format**.
4. Follow onscreen instructions to format the card.

Find downloaded files

You can download files and store them on your phone, including:

- Photos, videos, and documents you save from emails or texts
- Books, movies, or other content that you buy from Play Store and save for offline viewing
- Other files or images you download from the web

When the file has finished downloading, you'll see in the status bar. Tap the notification to open the file in the appropriate app.

To view, edit, or delete downloads:

1. Open the **Files** app.
2. Tap **Downloads**.
3. Do any of the following:
   - To open or play a file, tap it. You can only edit some types of files.
   - To sort files by name, date modified, or size, > **Sort by**.
   - To share a file, touch & hold it, then tap .
   - To delete a file, touch & hold it, then tap .

Tip: To access downloads from a computer, connect your phone with a USB cable. Then open the phone's internal storage, and look for files in the Downloads folder.

Recover recently deleted files

You can try to recover recently deleted photos, videos, or texts. But do so as soon as possible. The more you use the phone, the more likely the file will be overwritten with new data.

1. Search for “file recovery” in Play Store and install one of the apps.
2. Use the app to scan your phone.
3. If you can't recover recently deleted items, try connecting your phone to your computer with a USB cable and using a desktop program for file recovery.

Tip: Back up your photos to the cloud so you won't lose them if you delete them from your phone.

Upload music to cloud

You can store songs from your library in the cloud, for free, with Google YT Music (not available in all countries). Then you can instantly listen to your tunes wherever you are.

You can upload music from your:

- iTunes library
- Windows Media Player library
- My Music folder, or any folder on your computer

To upload your music:

1. On your computer, visit music.youtube.com
2. Click on your profile picture > **Upload music**.

   To learn more, read Google's help.

After you've uploaded your music, you can listen to it:

- On your computer by visiting music.youtube.com
- On your phone with the YT Music app

Upload photos and videos

Back up automatically

1. Open the **Photos** app.
2. Touch your profile icon > **Turn on backup**.

   You can change back up settings any time.

Adjust back up settings

To adjust settings for your automatic backups:

1. Open the **Photos** app.
2. Touch your profile icon > **Photos settings** > **Backup**.
3. Adjust settings as needed:
   - To choose high quality or original size for uploads, touch **Backup quality**.
   - To back up items in your Download, Screenshots, and third-party app folders, touch **Back up device folders**.
   - To back up items over your cellular network, touch **Mobile data usage**, then adjust options for photos, videos, and roaming.

Back up manually

1. Open the **Photos** app.
2. Open the photo or video.
3. On the photo or video, touch . (Swipe up if you don't see .)

View your backed up photos and videos

From your phone, open the Photos app.

From your computer, sign in to photos.google.com.

Manage your storage

1. Open the **Photos** app.
2. Touch your profile icon > **Photos settings** > **Backup**.
3. Touch **Manage storage**.
4. View how many GB of storage you have used and approximately how much time your remaining storage will last. If you're running low, follow onscreen instructions to get more storage.

5. To review and delete recommended photos:
    a. Under **Review and delete**, touch a category (such as large photos and videos, blurry photos, screenshots).
    b. Touch & hold an item to delete, then touch others to include.
    c. Touch .

More help

To learn more, read Google's help.

Scan documents and make copies

Scan document to Drive

Use your phone to scan documents directly to Google Drive.

1. Open the **Drive** app.
2. Touch .
3. Position the document in the camera frame and hold your phone steady until the scan completes.
4. If desired, use the tools at the bottom of the screen to crop, rotate, filter, or clean the scan.
5. Tap **Done**.
6. If desired, change the document title, location, or file type, then tap **Save**.

In Drive, open the file and tap to share or print the scan.

Scan and save to folders from your home screen

Add Drive Scan widgets to your home screen to scan and save to new or selected folders. Each widget saves to a single folder on Drive. So, add multiple widgets, one for each folder you need (receipts, billing statements, recipes, etc.).

Use location services

About location information

You can let your phone use GPS, Wi-Fi networks, mobile networks, and sensors to estimate your location. Apps that have your permission can use this information to deliver location-based services, such as the ability to check in, view traffic, find nearby restaurants, or tag your photos with the location where you took them.

Turn location on or off

To control what location information your phone can use:

1. Go to **Settings** > **Location**.
2. Turn **Use location** on or off to give or remove permission to use your location information.

   When it's off, your phone can't find your precise location or share it with any apps. However, turning this off disables many useful features and apps.

Tip: To add a Location tile to quick settings, open quick settings. Tap . Then drag the Location tile where you want it.

Review apps using your location

To see which apps have recently accessed your location:

1. Go to **Settings** > **Location** > **App location permissions**.

   You'll see apps listed by those allowed all the time, some of the time, and not allowed.
2. To change permissions, tap the app name, then select the location access you want.

Review services using your location

1. Go to **Settings** > **Location** > **Location services**.

2. Tap a service to open its settings:
   - **Earthquake alerts**: Sends you an alert about nearby earthquakes of magnitude 4.5 or more. (Not available in all countries.)
   - **Emergency Location Service**: Sends your location to emergency responders when you call or text an emergency number.
   - **Google Location Accuracy**: Improves location accuracy for Maps and Find My Device.
   - **Google Location History**: Clear saved location details and turn location history on or off.
   - **Google Location Sharing**: View who's sharing your location, change sharing duration, and stop sharing.
   - **Carrier Location Access**: Improves carrier services and analytics.
   - **Wi-Fi scanning**: Allow or prevent apps and services from scanning for Wi-Fi networks at any time, even when Wi-Fi is off.
   - **Bluetooth scanning**: Allow or prevent apps and services from scanning for nearby Bluetooth devices at any time, even when Bluetooth is off.

Fix an issue

Issue: Location isn't working

After each step, check to see if the issue is fixed.

1. Turn location off and then on again.
2. Turn airplane mode on, wait 15-20 seconds, then turn it off again.
3. If you're using a case, remove it and check if GPS is working. The case might be obstructing the sensor.
4. Check if Battery saver is on. To save power, when Battery saver is on, your phone disables location services.
5. Turn your phone off and then on again.
6. Check for updates to the Maps app. After updating the app, restart your phone.
7. Clear the cache and data for the Maps app.
8. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.

   If location works correctly in safe mode, a 3rd party app is probably causing the issue. A lot of apps use your phone's location. If these apps end up with corrupted files, it can affect your phone's location too.

Issue: Location isn't accurate

Turn accuracy on:

1. Go to **Settings** > **Location**.
2. Touch **Location services** > **Google Location Accuracy**.
3. Turn **Improve location accuracy** on .

   When this setting is on, your phone uses GPS, Wi-Fi, mobile networks, and sensors to get the most accurate location.

   When it's off, your phone uses only GPS to find location, which can be slower and less accurate.

Let your phone scan for nearby Wi-Fi networks or Bluetooth devices:

1. Go to **Settings** > **Location**.
2. Touch **Location services**.
3. Turn **Wi-Fi scanning** and **Bluetooth scanning** on .

Visual assistance

Adjust colors if you’re color blind

Color correction is an experimental feature and might not work correctly everywhere on your phone.

Turn it on

1. Go to **Settings** > **Accessibility** > **Color and motion**.
2. Tap **Color correction** and turn **Use color correction** on .
3. To replace all screen colors with gray tones, choose **Grayscale**. Or, correct colors based on your vision:

How you see colors	Option to choose
It’s difficult to tell violet from blue. Yellow and green appear redder.	Red-green (Green weak, deuteranomaly)
Colors aren’t bright. Red, orange, and yellow appear greener.	Red-green (Red weak, protanomaly)
It’s difficult to tell yellow and red from pink. Blue appears greener.	Blue-yellow (Tritanomaly)

If colors don't appear as you expect, troubleshoot the issue.

Add a shortcut

To use an accessibility shortcut for quickly turning Color correction on/off:

1. Go to **Settings** > **Accessibility** > **Color and motion** > **Color correction**.
2. Turn **Color correction shortcut** on .
3. Tap **Color correction shortcut** and choose one or more shortcuts:
   - For a shortcut on your home screen, select **Tap accessibility button**.
   - To press & hold both Volume buttons simultaneously, select **Hold volume keys**.

Use color inversion

Color inversion flips all colors on your screen, turning light screens dark and dark screens light. This affects everything on screen, including media and images. While it can make reading text easier (light text on a dark background), it can also make it harder to understand images and videos.

If you're using Dark theme to reduce eye strain when reading, you might encounter specific apps that don’t support it and still have a light background. Turn Color inversion on to use those apps with a dark background. You can use quick settings or a shortcut to easily turn Color inversion on and off.

Turn it on

1. Go to **Settings** > **Accessibility** > **Color and motion**.
2. Tap **Color inversion**.
3. Turn **Use color inversion** on .

   is added to your quick settings so you can easily turn it off/on.

Add a shortcut

To use an accessibility shortcut as an alternate to the quick setting:

1. Go to **Settings** > **Accessibility** > **Color and motion** > **Color inversion**.
2. Turn **Color inversion shortcut** on .
3. Tap **Color inversion shortcut** and choose one or more shortcuts:
   - For a shortcut on your home screen, select **Tap accessibility button**.
   - To press & hold both Volume buttons simultaneously, select **Hold volume keys**.

Use it

Open quick settings and tap to turn it on/off.

Or, if you set up accessibility shortcuts, tap or press & hold both Volume buttons.

Make screen extra dim

If the brightness slider in quick settings doesn't go low enough, you can set the screen to extra dim.

Set it up

1. Go to **Settings** > **Accessibility** > **Extra dim**.
2. Turn **Make screen extra dim** on .

   The first time you do this, Extra dim is added to quick settings.
3. Use the **Intensity** slider to dim the screen.
4. Optional: After you restart the phone, Extra dim will be turned off. To prevent this, turn on **Keep on after device restarts** .

Add a shortcut

To use an accessibility shortcut as an alternate to the quick setting:

1. Go to **Settings** > **Accessibility** > **Extra dim**.
2. Tap **Extra dim shortcut** and select the shortcuts to use:
   - For a shortcut on your home screen, select **Tap accessibility button**.
   - To press & hold both Volume buttons simultaneously, select **Hold volume keys**.

Use it

Open quick settings and tap to turn it on/off. Touch & hold to adjust intensity and other settings.

Or, if you set up accessibility shortcuts, tap or press & hold both Volume buttons.

Bold all text

To change all text on the screen to bold for easier reading:

1. Go to **Settings** > **Accessibility** > **Display size and text**.
2. Turn **Bold text** on .

Magnify the screen

Turn it on

To set up the way to start (zoom in) and stop (zoom out) magnification:

1. Go to **Settings** > **Accessibility** > **Magnification**.
2. Turn **Magnification shortcut** on .

   The shortcut is added to your screen.
3. You can magnify the entire screen or you can use a magnifier that you can move around to zoom in on parts of the screen.

   To switch between methods, leave **Magnification type** set as **Switch between full and partial screen**.

   If you want to always magnify the entire screen, tap **Magnification type** and choose **Magnify full screen**.

   If you only want the magnifier box, tap **Magnification type** and choose **Magnify part of screen**.

Add a shortcut

To use gestures in addition to the shortcut:

1. Go to **Settings** > **Accessibility** > **Magnification**.
2. Tap **Magnification shortcut** and:
   - To press & hold both Volume buttons simultaneously, select **Hold volume keys**.
   - To quickly tap the screen three times, select **Triple-tap screen**.

     Turning this on might make your phone feel slower. After you turn on magnification, single taps take slightly longer. This short delay lets your phone find out if your tap is part of a triple tap.

Use magnification

1. To start magnification, tap .

   You'll see an orange border around the screen.

2. Tap the area of the screen to magnify, then:
   - Drag two or more fingers to scroll.
   - Pinch two or more fingers to adjust zoom.
3. To change how magnification works, tap the screen to see , then:
   - To magnify part of the screen, tap to choose between a small , medium , or large box.

     Then use to move the magnification area around the screen.
   - To magnify the whole screen, tap .

     If you don't see , change your settings to use **Switch between full and partial screen** for your **Magnification type**.
4. To turn magnification off, tap .

   The orange border disappears.

You can't zoom in on the keyboard or the buttons.

Fix an issue

If you open or close an app when zoomed in, your phone automatically zooms out. To zoom in again, use . Or, go to **Settings** > **Accessibility** > **Magnification** and turn **Keep on while switching apps** off .

Use TalkBack to read screens

Hear descriptions of everything you touch.

Set it up

1. Go to **Settings** > **Accessibility**.
2. Tap **TalkBack** and turn **Use TalkBack** on .
3. Tap **Settings** and set the options you want.

Add a shortcut

To add an accessibility shortcut for quickly turning TalkBack on/off:

1. Go to **Settings** > **Accessibility** > **TalkBack**.
2. Turn **TalkBack shortcut** on .
3. Tap **TalkBack shortcut** and choose one or more shortcuts:
   - For a shortcut on your home screen, select **Tap accessibility button**.
   - To press & hold both Volume buttons simultaneously, select **Hold volume keys**.

When TalkBack is on

To hear descriptions:

- Tap an item. Your phone speaks the name.

- Start typing. Your phone speaks each number or letter.
- Drag status bar down. Your phone speaks all of the notifications.
- Open a message, file, or book. Your phone reads the text out loud.

To change readout volume:

- Press a Volume button to open volume settings, then use the slider to adjust the level.
- Or, during voice readout, repeatedly press a Volume button.

Stop readout

If you added the shortcut, tap or press & hold both Volume buttons.

Or, turn TalkBack off:

1. Go to **Settings** > **Accessibility**.
2. Tap **TalkBack** and turn **Use TalkBack** off.

Hear audio description of movies and shows

For movies and shows that support it, you can hear a description of what's happening on screen.

1. Go to **Settings** > **Accessibility**.
2. Turn **Audio description** on or off.

More assistance

You can also:

- Use voice commands
- Dictate text instead of typing
- Set your phone to make confirmation sounds after you touch or unlock the screen
- Assign a ringtone for notifications from specific apps

Hearing assistance

Caption all speech

Your phone can automatically caption videos, podcasts, audio messages, and recordings.

Turn captions on/off

Press a Volume button, then turn it on or off. (If you don't see this icon, change caption settings to add it.)

Or, go to **Settings** > **Accessibility** > **Live Caption** and turn it on or off.

Battery use: When your battery gets low and Battery saver is on, Live Caption automatically turns off.

Use the caption box

- To move captions, drag the box.
- To expand or shrink captions, touch the box twice.

Change caption settings

You can hide or show:

- Profanity
- Sound labels (laughter, applause, music)
- Caption icon () in volume controls

1. Go to **Settings** > **Accessibility** > **Live Caption**.
2. Turn settings on or off.

Turn on video captions

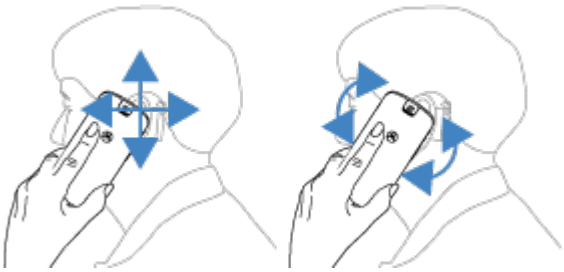
1. Go to **Settings** > **Accessibility**.
2. Tap **Caption preferences** and turn **Show captions** on.
3. Specify options (language, text size, and style) for closed captioning.

Use hearing devices

To get phone audio in your hearing device, pair it with your phone.

1. Tap **Settings** > **Accessibility** > **Hearing devices**.
2. Make sure your hearing device is turned on and ready to pair.
3. Tap **Pair new device**.

During a call, hold the phone to your ear, then rotate or move it to get the best position for speaking and listening.



Dexterity assistance

Change timing controls

If you need more time to respond to a notification or messages that are visible only temporarily, you can adjust the time before they disappear:

1. Go to **Settings** > **Accessibility**.
2. Tap **Timing controls**.
3. Adjust settings:
   - You can adjust the amount of time before your touch/tap on the screen becomes touch & hold. If you find that you accidentally touch & hold when you intend to tap, choose a longer delay. Use **Touch & hold delay** to select short, medium, or long delay.
   - If messages that ask you to take action are disappearing too quickly, tap **Time to take action** and choose a longer time. Not all apps support this setting.
   - If you're using a connected mouse, you can set the cursor to click automatically when the cursor stops moving for an amount of time. Tap **Autoclick (dwell timing)** and select the amount of time.

Use external switch or keyboard

If you're unable to use a touchscreen, Switch Access lets you control the phone using external switches or keyboard keys to select items, scroll, enter text, and more.

To use Switch Access, you must have one of the following:

- **An external switch.** USB or Bluetooth switch devices send keystroke signals to your phone.
- **An external keyboard.** Standard USB or Bluetooth keyboards can work as switch devices by assigning one or more keys to actions.

Set up Switch Access

1. Go to **Settings** > **Accessibility**.
2. Tap **Switch Access**.
3. Turn **Use Switch Access** on .
4. Follow onscreen instructions to select:
   - Number of switches
   - Face gesture settings
   - Scanning options
   - Switch assignments

To adjust options for Switch Access later, go to **Settings** > **Accessibility** > **Switch Access** > **Settings**.

Use Switch Access

1. Connect the external device to your phone by pairing with Bluetooth or using USB. See the manufacturer's instructions for details.

2. Press the assigned switch or key to scan and highlight items on the screen or to select highlighted items.

Use accessibility shortcuts

About accessibility shortcuts

Shortcut: Essential controls for your phone

The accessibility menu gives quick access to essential features on your phone.

Shortcut: Accessibility features

Easily turn accessibility features on/off from any screen. For each feature you're using, you can:

- Add a button to the screen. The button fades when not in use.

  If you set up multiple buttons, they display as a group; drag to reposition the group around the sides of the screen.

  If you're using gesture navigation, you can set up a gesture instead of buttons.
- Set your phone so that you press both Volume buttons to turn the feature on/off.

  If you set this up for multiple accessibility features, you'll see a list of those features when you press both Volume buttons.

Use accessibility menu of essential controls

Open a large menu where you can:

- Call your assistant
- Open accessibility settings
- Lock or turn off the phone
- Adjust volume
- Adjust brightness
- See recent apps to return to one
- Take a screenshot
- Open quick settings

Turn it on

1. Go to **Settings** > **Accessibility**.
2. Tap **Accessibility Menu**.
3. Turn **Accessibility Menu shortcut** on.
4. To increase the size of the buttons on this menu, tap **Settings**, then turn **Large buttons** on.

Use it

If you're using gesture navigation:

1. Use two fingers to swipe up from the bottom of the screen.

2. Choose an option from the menu.

If you're using 3-button navigation:

1. At the bottom of the screen, tap .
2. Choose an option from the menu.

Manage accessibility buttons

For each accessibility feature you're using, you can add a button to the screen to quickly turn the feature on/off.

Add buttons

When you turn on an accessibility feature in **Settings** > **Accessibility**, if the feature supports shortcuts, you'll see a switch to turn on the shortcut. Tap the switch's name to see options for adding the button and assigning the feature to the Volume buttons.

Change button size and transparency

This setting applies to the shortcuts for all accessibility features.

1. Go to **Settings** > **Accessibility** > **Accessibility shortcuts**.
2. If you're using 3-button navigation, tap **Accessibility button**.

   If you're using gesture navigation, tap **Accessibility button & gesture**.
3. Adjust how the buttons look and work:
   - Tap **Size** and choose **Large** or **Small**.
   - To keep the buttons always visible, turn **Fade when not in use** off .
   - To make the buttons more or less transparent, drag the **Transparency when not in use** slider.

Gesture navigation: Choose between buttons and gesture

If you're using gesture navigation, you can choose between using a gesture or a button for accessibility shortcuts. This setting applies to the shortcuts for all accessibility features.

1. Go to **Settings** > **Accessibility** > **Accessibility shortcuts**.
2. Tap **Accessibility button & gesture**.
3. Tap **Use button or gesture** and select which to use.

Press Volume buttons for accessibility features

You can press & hold the Volume buttons to turn accessibility features on/off.

Set it up

1. When you turn on an accessibility feature in **Settings** > **Accessibility**, if the feature supports shortcuts, you'll see a switch to turn on the shortcut. Tap the switch's name to see the option for using the Volume button gesture as the shortcut.
2. If you've assigned two or more accessibility features to the Volume buttons, you can add more shortcuts with the gesture. Press & hold both Volume buttons, then tap **Edit shortcuts** to select from a list of all accessibility features.

Use the shortcut

Press & hold the Volume Up and Down buttons at the same time for three seconds.

If you assigned multiple accessibility features, you'll see a list. Tap a feature to it turn on/off.

Find accessible apps and devices

Motorola phones are tested with assistive technologies including TalkBack, Magnification, Voice Access, and Switch Access.

Learn about accessibility features of various electronic devices, including mobile phones, tablets, smart TVs, and wearables at gari.info

App listings in the Play Store app have tags in the “About this app” section that identify their accessibilty features. Tap a tag to explore apps with similar accessibilty features.

Set or change default apps

If you have multiple apps that do the same thing, you can pick which app to use by default.

Pick when asked

Sometimes, your phone asks which app to use. For example, your phone might ask which app to use to open a PDF file.

To set a default when asked:

1. Tap the app to use.
2. Pick how often you want to use that app for this action: **Always** or **Just once**.

If you select Always, you won't be asked which app to use anymore. To have your phone ask you again, you can clear the default:

1. Go to **Settings** > **Apps**.
2. Tap **Default apps** > **Opening links**.
3. Tap the app you selected as default.
4. Turn **Open supported links** on .

Pick any time

You can change some default apps (such as browser or messaging) at any time:

1. Go to **Settings** > **Apps**.
2. Touch **Default apps**.
3. Touch the default to change.
4. Touch the app to use.

Adjust special app access

In **Settings** > **Apps** > **Special app access**, you can adjust these settings:

- **Usage access**: Control which apps have access to data about your app usage (what other apps you're using and how often, your carrier, language settings, and other details).
- **Unrestricted data**: Allow certain apps to use background data even when Data Saver is on. Learn more.

You can also control whether apps have access to features such as Picture-in-picture, Battery optimization, and Do Not Disturb. In general, you shouldn’t need to adjust these.

Add or remove accounts

Add accounts

You can connect to your accounts, including your Google account, your Moto account, email, and social networking accounts.

Google account

When you set up your phone, you were prompted to add a Google account. If you skipped it then, be sure to set one up now so you can download apps from Play Store, get a customized information feed, and take full advantage of the Calendar, Gmail, and other apps included with your Google account.

To add a Google account:

1. Go to **Settings**.
2. Tap **Passwords & accounts** > **Add account**.
3. Tap **Google** and follow the onscreen instructions to add an existing account or to create a new one.
4. Once the account is added, Calendar, Contacts, and other account features and apps are updated with information from that account. You can review and change what syncs with your phone for that account.

Tip: Keep your apps up-to-date. To see if newer versions of the apps associated with your Google account are available, open the Play Store app and tap your profile icon > **Manage apps & device**.

Email or other app account

Accounts are automatically added when you:

- Set up corporate email
- Set up personal email for non-Gmail addresses
- Install apps that require a username/password to log in, such as messaging, shopping, or streaming content

To review these accounts or add another:

1. Go to **Settings**.
2. Tap **Passwords & accounts** > **Add account**.
3. Tap the type of account to add and follow the onscreen instructions.

   If you don't see the type of account you want to add, install the related app from Play Store, then sign into your account through the app.
4. Once the account is added, account-related features and apps are updated with information from that account. To review and change what syncs with your phone, tap the account type, then account name.

Remove accounts

If you remove an account, information you synced will be removed from your phone, but it is not deleted from your account.

To remove an account:

1. Go to **Settings** > **Passwords & accounts**.
2. Tap the account name.
3. Tap **Remove account**.

Tip: If you have trouble removing a corporate account, go to **Settings** > **Security & privacy** > **More security & privacy** > **Device admin apps** and turn off the app for the account, then try to remove it again.

Change name & info in your Google account

You can update, add, and remove basic info for your Google account:

1. Go to **Settings** > **Google** > **Manage your Google Account**.
2. Touch **Personal info**.
3. Update information as needed. Add or change your profile picture, edit your name and birthday. Learn more.

Forgot your Google password, or want to change it? Learn how to reset your password.

Other questions about your account? Read Google's help.

Sync apps with your Google account

When your phone syncs, your Google apps refresh their data, and you get notifications about updates.

See which apps auto-sync

By default, apps made by Google sync automatically. You can turn auto-sync off and back on for individual apps.

Whether other apps (not made by Google) can sync varies by app.

See which Google apps auto-sync

1. Go to **Settings** > **Passwords & accounts**.
2. Tap the account name.
3. Tap **Account sync**.
4. Review the list of your Google apps and when they last synced.

Check other apps

To see if your other apps can auto-sync:

1. Go to **Settings** > **Passwords & accounts**.
2. Review the list of accounts:
   - If the app isn't listed, then it can't auto-sync.
   - If it is listed, tap its name to see any sync options you can adjust.

Turn off auto-sync

Turning off auto-sync doesn't remove the app or your data. It only stops the app from automatically refreshing your data.

Turn off for certain Google apps

1. Go to **Settings** > **Passwords & accounts**.
2. If you have multiple accounts on your phone, tap the one you want.
3. Tap **Account sync**.
4. Turn off the apps you don't want to auto-sync.

   For example, sync your Calendar and Gmail but don't sync Drive.

Turn off for your Google account

1. Go to **Settings** > **Passwords & accounts**.
2. Turn **Automatically sync app data** off .

   To receive emails, calendar reminders, or other notifications from Google apps, you'll need to sync manually.

Tip: Turning off auto-sync can help save battery life. To resume auto-sync after your battery recharges, turn it back on again.

Sync manually

1. Go to **Settings** > **Passwords & accounts**.
2. Tap the account name.
3. Tap **Account sync** > > **Sync now**.

Fix an issue

Select an issue to see troubleshooting steps:

- Account sync issues
- Forgot password for Google account
- Problems with Facebook, WhatsApp, other apps

Control what info Google collects

Google collects information from you to provide personalized services and tailored content, as outlined in the Google Privacy Policy.

You can review, delete, and control the information Google collects about you. Learn more from Google about:

- Viewing and controlling what information is collected (search, YouTube, recordings of your voice commands, location).
- Deleting your search history and other activity.
- Reviewing your location history.
- Any other questions about your account.

About security

Screen lock options

To keep your phone secure, use a screen lock when it goes to sleep:

- Set up a pattern, PIN, or password to unlock your phone.
- Set up facial recognition if you want to unlock with your face.
- Keep your phone unlocked when you're at a trusted place like home or work, when you're connected to a trusted device like your car audio system, or until you set your phone down.

When your phone is locked, you can:

- Access notifications and quick settings, start a call, and open the camera from the lock screen.
- Make emergency calls on a locked phone. A locked phone still rings; you don't need to unlock it to answer.

If you forgot your pattern, PIN, or password, follow these steps.

You can customize the lock screen by adding your contact info. You can also control which notifications appear on your lock screen.

Fingerprint sensor

Quickly and easily verify your identity using the fingerprint sensor on your phone, instead of entering a password, PIN, or pattern to unlock the phone, make online and in-store purchases, and sign into banking and financial apps.

You can add and remove fingerprints.

Fingerprints:

- Are created from features of your fingertip, converted to a mathematical representation, and then encrypted and stored only on the phone. No fingerprint images are ever stored.
- Are never shared with Google or Motorola.
- Are never shared with other apps. Your phone only shares the verification, not the fingerprint.

Note: A fingerprint screen lock may be less secure than a strong pattern or PIN lock. It is possible to unlock the phone using a physical copy of a matching fingerprint.

Additional security options

- Protect your phone in case it’s lost or stolen. Use Find My Device.
- Connect to a virtual private network if you need to access files on a secure network.
- See when apps are using your microphone and camera and block them if needed.
- Add a SIM lock to prevent others from using your cellular plan and accessing account information if your phone is stolen.
- Prevent viruses and other attacks on your data and privacy with Google Play Protect.

Protect against harmful apps

Scan phone for harmful apps

Play Protect helps keep your phone secure by automatically scanning your apps, including sideloaded apps, to check for potentially harmful apps (malware).

If Play Protect finds a potentially harmful app, it stops the app from running and warns you so that you can uninstall it.

To see the results or to rescan:

1. Open the **Play Store** app.
2. Tap your profile icon M > **Play Protect**.
3. Review the results of the latest scan, or tap **Scan**.

Play Protect is on by default.

To learn more, read Google's help.

If your phone seems slow

If you've scanned your phone to confirm there aren't any potentially harmful apps but your phone seems slow, troubleshoot the issue.

Make sure your phone can be found

Make sure your phone can be found. Find My Device allows you to remotely locate, lock, and erase your phone.

If you ever need to find your phone, your phone will need to:

- Be turned on
- Be signed in to a Google account
- Be connected to mobile data or Wi-Fi
- Have location services turned on. If location services are off, you can lock or erase the phone, but cannot locate it.
- Have Find My Device turned on

To check that Find My Device is on for your phone:

1. Go to **Settings** > **Security & privacy**.
2. Tap **Device finders**.
3. Tap **Find My Device** and turn it on .

To confirm that you can find your phone, go to android.com/find on your phone or from a computer.

If you have lost your phone, consider calling your carrier to suspend your account. If your phone doesn't have a SIM lock and it's stolen, someone could use your SIM card.

Set a screen lock

You can set up a screen lock to secure your phone. Each time you turn on your phone or turn on the screen, you'll be asked to unlock it.

Set or change screen lock

1. Go to **Settings** > **Security & privacy**.
2. Tap **Screen lock** and select the type of lock you want.

   Some lock options aren't available if you added a VPN or a work (corporate) email account to your phone.

Tip: After you set up a pattern, PIN, or password, you can set up fingerprint security to unlock your phone with the fingerprint sensor.

Screen lock types

No lock:

- **None**: This gives no protection, but you can quickly access your home screen.
- **Swipe**: Swipe 🔒 up. This prevents accidental dialing but doesn't secure the phone.

Standard lock:

- **Pattern**: Draw a pattern on a grid.
- **PIN**: Enter a four to sixteen digit numeric code. Longer PINs are more secure.
- **Password**: Enter four to sixteen letters, digits, or symbols for the password. A long, strong password is the most secure option.

Biometrics:

- Unlock with your face
- Unlock with your fingerprint

You must set up one of the 3 standard locks in order to use biometrics.

Unlock your screen automatically

If you're using a PIN, password, or pattern, you can:

- Stay unlocked when connected to a device, like your car audio system.
- Stay unlocked at a specific location.
- Stay unlocked when holding or carrying your phone.

Tips:

- You can swipe up from anywhere on the screen when unlocking. You don't need to tap the icon.
- Some of these options aren't available if you added a VPN or a work (corporate) email account to your phone.

Remove screen lock

1. Go to **Settings** > **Security & privacy**.
2. Tap **Screen lock**.
3. Enter your current PIN, password, or pattern to confirm your identity.
4. Select **None** or **Swipe**.

Quickly tighten lock screen security

Unlocking with the fingerprint sensor and setting up automatic unlocking make it easier to keep your phone secure and minimize when you need to enter your PIN, pattern, or password. But sometimes you need to trade convenience for more security. You can temporarily tighten locks and prevent lock screen notifications.

1. Swipe down from the top of the screen **twice**, then touch > **Power off**.

   Or, press & hold the **Power** + **Volume up** buttons simultaneously, then touch **Power off**.

2. Touch **Lockdown**.

   Your fingerprint sensor and automatic unlock settings are disabled and notifications won't be displayed on your lock screen.

3. To exit Lockdown, unlock your phone with your PIN, pattern, or password.

Set advanced lock options

Use these options to control when your phone locks and whether your code is visible when you unlock.

You can also control what content is included on your lock screen.

Set time before locking

Unless kept unlocked automatically, your phone locks the screen five seconds after the screen turns off.

To increase or decrease the amount of time before automatically locking the screen:

1. Go to **Settings** > **Security & privacy**.
2. Next to **Screen lock**, tap ⚙.
3. Tap **Lock after screen timeout**, then select a duration.

Stop Power button from instantly locking

You can manually lock your phone by pressing the Power button. If you want the Power button to turn off the screen but not lock it:

1. Go to **Settings** > **Security & privacy**.
2. Next to **Screen lock**, tap ⚙.
3. Tap **Power button instantly locks** off ⬭.

After the screen turns off, your phone will still lock after the time set for the automatic lock.

Hide your pattern or PIN

If you're using a pattern screen lock, make it more secure by hiding finger traces on the screen when you draw:

1. Go to **Settings** > **Security & privacy**.
2. Tap **Device unlock**.
3. Next to **Screen lock**, tap ⚙.
4. Turn **Make pattern visible** off ⬭.

If you're using a PIN screen lock, make it more secure by disabling animations that show when you touch PIN numbers:

1. Go to **Settings** > **Security & privacy**.
2. Tap **Device unlock**.
3. Next to **Screen lock**, tap ⚙.
4. Turn **Enhanced PIN privacy** on ⬭.

Hide passwords

To control whether characters briefly display when you enter a password to unlock your phone or log into websites and apps:

1. Go to **Settings** > **Security & privacy** > **Privacy**.
2. Turn **Show passwords** off .

Use fingerprint security

Set up fingerprint security

Use the fingerprint sensor to unlock your phone, make fast and secure online and in-store purchases, and sign into bank and finance apps.

1. Go to **Settings** > **Security & privacy**.
2. Tap **Device unlock** > **Face & Fingerprint Unlock**.
3. Tap **Fingerprint**, then unlock your phone.
4. Follow the onscreen instructions to scan your fingerprint using the sensor on the side of your phone.

Fingerprints are stored securely on the phone.

Add more fingerprints

Keep in mind that:

- If multiple users share the phone, users should add their fingerprints from within their user profile, instead of adding multiple fingerprints to your owner profile.
- Anyone whose fingerprints are added to a user profile can unlock the phone and authorize purchases with the associated Google account or apps.

Add a fingerprint for each finger you want to use with the sensor:

1. Go to **Settings** > **Security & privacy**.
2. Tap **Device unlock** > **Face & Fingerprint Unlock**.
3. Tap **Fingerprint** and enter your pattern, PIN, or password to verify your identity.
4. Tap **Add fingerprint**.
5. Use the fingerprint sensor to scan another fingerprint.
6. Rename each fingerprint. Tap the current name, type a name, and tap **OK**.

Remove a fingerprint

1. Go to **Settings** > **Security & privacy**.
2. Tap **Device unlock** > **Face & Fingerprint Unlock**.
3. Tap **Fingerprint** and enter your pattern, PIN, or password to verify your identity.
4. Tap next to the fingerprint.

Use fingerprint to unlock phone

To wake and unlock your screen, or any time you see on the screen, touch the sensor to verify your identity.

Tip: You can temporarily tighten security by turning off fingerprint unlocking and lock screen notifications with Lockdown mode.

Use fingerprint to sign in to apps

To use the fingerprint sensor with third-party apps:

- Be sure the app supports fingerprint recognition.
- Install the app and open its settings to adjust options, like enabling fingerprint unlock.
- Consult the app's help info for more instructions.

To temporarily turn this feature off:

1. Go to **Settings** > **Security & privacy** > **Device unlock** > **Face & Fingerprint Unlock**.
2. Tap **Fingerprint**.
3. Enter your pattern, PIN, or password to verify your identity.
4. Turn **Verify it's you in apps** off .

Why am I still asked for PIN/pattern?

For maximum security, you still need to enter your pattern, PIN, or password:

- Every time you power up your phone
- When more than 72 hours have passed since you last unlocked the phone
- When you go to **Settings** > **Security & privacy** > **Device unlock** > **Face & Fingerprint Unlock**
- When the sensor can’t read the fingerprint

Fix an issue

Issue: Sometimes the sensor can’t read my fingerprints.

Each finger has a unique print. If you’ve added only one fingerprint, add more for other fingers you want to use with the sensor.

The sensor may have trouble reading fingerprints if your finger is:

- Wet
- Oily
- Dirty
- Injured

If a registered fingerprint isn't working as expected, remove and re-add the fingerprint. If your finger is injured, add fingerprints for your other fingers and use them until healed.

Issue: Fingerprint option disappeared from Security & privacy menu.

After each troubleshooting step, check to see if your issue is fixed.

1. Turn your phone off and then on again.
2. Check if a software update is available for your phone.

3. Check for app updates.

   Open the **Play Store** app, then touch your profile icon > **Manage apps & device**.

4. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.

   If the sensor works correctly in safe mode, a 3rd party app is probably causing the issue. These apps can cause issues: lock screen apps, app locks that use the fingerprint sensor, RAM boosters, and RAM cleaners.

5. Reset the phone.

Stay unlocked when connected with a trusted device

Set up trusted devices

You can keep your phone unlocked when it is connected to a trusted device, like your Bluetooth watch or car.

1. Make sure you have:
   - Set a screen lock on the phone.
   - Turned on Bluetooth on the phone.
   - Paired your phone with the device.
2. Go to **Settings**.
3. Tap **Security & privacy** > **More security & privacy** > **Extend Unlock**.

   If you don't see Extend Unlock, try the following:
   - Update Google Play services. In the Google Search widget on your home screen, search for “Google Play services”, then tap the app to open it in Google Play.
   - Go to **Settings** > **Security & privacy** > **More security & privacy** > **Trust agents** and enable **Extend Unlock**.
4. Unlock your phone, then tap **Trusted devices** > **Add trusted device**.
5. Tap a device to select it from the list of connected devices.

> **Tip:** If your device isn't in the list, make sure you are paired with it.

When the phone is connected to the device, the phone automatically unlocks.

Remove trusted devices

1. Go to **Settings**.
2. Tap **Security & privacy** > **More security & privacy** > **Extend Unlock**.
3. Unlock your phone, then tap **Trusted devices**.
4. Tap the device name and confirm that you want to remove it.

Manually lock phone

If you need to make sure the phone stays locked even when you’re connected to a trusted device, you can manually lock the phone.

On the lock screen, tap 🔒. The phone stays locked until the next time you manually unlock it.

Unlock with your face

Before using face matching

Keep in mind that:

- If your phone has been locked for more than 4 hours, face matching won't work until you first unlock with another method.
- Looking at your phone can unlock it, even when you don't intend to.
- Your phone can be unlocked by someone who looks a lot like you.
- Your phone can be unlocked by someone else if it’s held up to your face while your eyes are open. Keep your phone in a safe place. To prepare for unsafe situations, you can turn on lockdown.

Set up face matching

1. Go to **Settings** > **Security & privacy** > **Device unlock** > **Face & Fingerprint Unlock**.
2. Unlock your phone and tap **Face Unlock**.
3. Follow the onscreen instructions. Be sure to frame your entire face with the outline.

   Face matching data is stored securely on the phone.
4. Select face unlock options.

Whenever you turn on or wake the phone, it will search for your face and unlock the screen when it recognizes you.

Unlock your phone

Show your face to the lock screen.

If it doesn't recognize you, it stays locked and displays one of these icons.

Icon	How to unlock
	Use your password, PIN, or pattern
	Use the fingerprint sensor

Change unlock options

Prevent someone from using your photo to unlock phone

1. Go to **Settings** > **Security & privacy** > **Device unlock** > **Face & Fingerprint Unlock**.
1.

Turn off face matching

1. Go to **Settings** > **Security & privacy** > **Device unlock** > **Face & Fingerprint Unlock**.
2. Unlock the screen, then:
   - To turn if off temporarily, turn **Unlock your phone** off .
   - To remove your face data, tap **Delete face model**.

Fix an issue

If you're having trouble getting the phone to recognize your face:

1. Go to **Settings** > **Security & privacy** > **Device unlock** > **Face Unlock**.
2. Unlock your phone, then tap **Redo face scan**.
3. Be sure you are in a well lit environment. Avoid low light, strong light, and backlit environments to ensure the face image is clear.
4. Follow the onscreen instructions.

Unlock at trusted places

Set up trusted places

To avoid repeatedly unlocking your phone when you are at familiar and trusted locations (like home or work), use a Extend Unlock. You can still manually lock the phone at trusted places when needed.

1. Make sure you have:
   - Set a screen lock on the phone.
   - Turned on location services.
   - Entered your Home and Work locations in Maps if desired. To learn how, read Google's help.
2. Go to **Settings**.
3. Tap **Security & privacy** > **More security & privacy** > **Extend Unlock**.

   If you don't see Extend Unlock, try the following:
   - Update Google Play services. In the Google Search widget on your home screen, search for “Google Play services”, then tap the app to open it.
   - Go to **Settings** > **Security & privacy** > **More security & privacy** > **Trust agents** and enable **Extend Unlock**.
4. Unlock your phone, then tap **Trusted places**.
5. Set up your places:
   - If you added Home or Work locations in Maps, tap the location name and turn it on if desired.
   - To add a location, tap **Add trusted place**. Verify your current location to add it, or tap , type the address to add, and tap **Select this location**.

Manually lock phone

To lock your phone when you're in a trusted place, on the lock screen, tap . The phone stays locked until the next time you manually unlock it.

Remove trusted places

1. Go to **Settings**.
2. Tap **Security & privacy** > **More security & privacy** > **Extend Unlock**.
3. Unlock your phone, then tap **Trusted places**.
4. Remove the location from your trusted places:
   - For your Home or Work locations in Maps, tap the location name to toggle it off. To remove the address entirely, you must remove it in Maps.
   - For custom places you added, tap the location name, then tap .

Keep phone unlocked while it's on you

You can keep your phone unlocked while you’re holding it in your hand or carrying it in your pocket or handbag. Just unlock it once, and it stays unlocked until you set it down (or manually lock it).

1. Make sure you have set a screen lock.
2. Go to **Settings**.
3. Touch **Security & privacy** > **More security & privacy** > **Extend Unlock**.

   If you don't see Extend Unlock, try the following:

   - Update Google Play services. In the Google Search widget on your home screen, search for “Google Play services”, then touch the app to open it.
   - Go to **Settings** > **Security & privacy** > **More security & privacy** > **Trust agents** and enable **Extend Unlock**.
4. Unlock your phone, then touch **On-body detection**.
5. Turn it on.

Pin an app screen

Turn on pinning

Use pinning to keep the current app in view until you unpin it. For example, you can pin a game and your child cannot navigate anywhere else on your phone.

You can set up a pattern, PIN, or password required to unpin.

1. Go to **Settings** > **Security & privacy** > **More security & privacy** > **App pinning**.
2. Turn pinning on.
3. By default, you must always enter your pattern, PIN, or password when unpinning a screen. If you don't want this security before accessing your other phone screens, turn this option off.

Pin and unpin an app

To pin a screen:

1. Make sure you've turned on pinning and have recently opened the app you want to pin.
2. Drag up from the bottom of the screen, hold, then release.
3. In the recent app list, touch the app's icon at the top of the preview to see .

   Be sure to touch the app's icon instead of the preview, which opens the app.
4. Touch .

To unpin it:

1. Drag up from the bottom of the screen and hold.
2. If you required a pattern, PIN, or password when you turned on pinning, enter it to unlock the phone.

Review or change permissions

Review by feature

The first time you use an app, and sometimes when you install or update it, you are asked to grant the app permission to access certain data and phone features. You can adjust these permissions any time.

To adjust permissions by feature:

1. Go to **Settings** > **Privacy**.
2. Tap **Permission manager** tab.
3. Tap a feature to see which apps have permission to use it.
4. Turn that permission on or off for each app as needed.

Review by app

To adjust permissions by app:

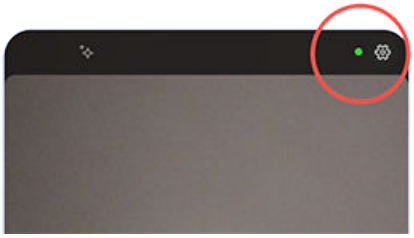
1. Touch & hold the app icon, then tap **App info** ⓘ.
2. Tap **Permissions**.
3. Turn each permission on or off as needed.

> **Tip:** To see how the app uses each permission, tap ⋮ > **All permissions**.

Control access to your mic and camera

Block mic or camera from app in use

Any time an app uses your mic or camera, you'll see the privacy indicator in the status bar.



When you see the privacy indicator:

1. Swipe the status bar down and tap or to see which app is using it.
2. To block that app from using it:
   a. Tap and tap **Manage permissions**.
   b. Tap **Microphone** > **Don't allow** or **Camera** > **Don't allow**.

Block/unblock for all apps

To quickly block and unblock access to your mic or camera for all apps:

1. Open quick settings and tap **Mic access** or **Camera access**.
2. Change it to **Blocked**.

   None of the apps on your phone can use it.
3. When you're ready to use the microphone or camera again, change **Mic access** or **Camera access** in quick settings to **Available**.

Hide passwords

To control whether characters briefly display when you enter a password to unlock your phone or log into websites and apps:

1. Go to **Settings** > **Security & privacy** > **Privacy**.
2. Turn **Show passwords** off .

Prepare for emergencies

Set up emergency SOS

In an emergency, you can press the Power button quickly five times or more to start a blaring sound and automatically call emergency responders. If you sign in to your Google account, you can set your phone to send SOS text messages with your current location to emergency contacts and to record emergency video.

Set it up

1. Go to **Settings** > **Safety & emergency** > **Emergency SOS**.
2. Sign in to your Google account to access all emergency features, then turn Emergency SOS on.
3. Adjust settings:
   - To play a loud warning sound when Emergency SOS is starting, touch and turn **Play alarm sound** on.
   - To change the default regional emergency number dialed for help, touch **Call emergency services** > **Number to call for help**, enter the number, and touch **OK**.

     Note: Don't enter a non-emergency number. If you do, your phone must be unlocked to use Emergency SOS, and your call might not be answered.
4. For additional SOS features, sign in to your Google account and then follow onscreen instructions. When you send an emergency SOS, you can have your phone text your location with your emergency contacts and record, backup, and share an emergency video. To learn more, read Google's help.

Send an emergency SOS

Press the Power button **five times or more** to start the countdown alarm and call for help.

Disable emergency SOS

Go to **Settings** > **Safety & emergency** > **Emergency SOS**, then turn **Call emergency services** off.

Set up emergency information

You can set up emergency information for first responders or others to view from your lock screen, such as your emergency contact and medical information (blood type, allergies).

Add your emergency information

1. Go to **Settings** > **Safety & emergency**.
2. Set up your information.

Note: Anyone who picks up your phone can see your emergency info without unlocking your phone.

View your emergency information

Anyone who needs to view your information should:

1. From the lock screen:
   - Swipe up and tap **Emergency call** below the keypad.
   - Or, press & hold the **Power** + **Volume up** buttons, then tap **Emergency**.
2. Tap **View emergency info**.

Add message to lock screen

To add your name or a short message to your lock screen for anyone who finds your phone:

1. Go to **Settings** > **Home & lock screen** > **Lock screen**.
2. Tap **Text on lock screen**.
3. Type the text to display and tap **Save**.

Tip: Don't put your mobile number as contact info on your lock screen unless you can access your voicemail from another device.

Send your location to emergency services

Not all carriers and countries support this feature.

If Android Emergency Location Service (ELS) works in your country and on your carrier's network and if you haven't turned off ELS, when you call or text an emergency number, ELS sends your location to authorized emergency responders to help them locate you.

If ELS is off, your carrier might still send the phone's location during an emergency call. For more information, check with your carrier.

To turn ELS on or off:

1. Go to **Settings** > **Location** > **Location services**.
2. Touch **Emergency Location Service**.
3. Turn it on or off .

To learn more about ELS, read Google's help.

Turn emergency alerts off/on

Your phone can receive free alerts to inform you of public safety messages, threats to life and property (like extreme weather), and other emergencies.

When an emergency alert is sent out, appears in the status bar. Touch the notification to read the alert.

You can turn most alerts off or on and adjust alert notification settings. Presidential alerts cannot be turned off.

Note: Because alerts are intended to save lives, please consider carefully before turning alerts off.

1. Go to **Settings**.
2. Touch **Safety & emergency** > **Wireless emergency alerts**.
3. Adjust settings as needed.

Use multiple languages

Change display language

You selected the language for your phone during set up. To change it:

1. Go to **Settings** > **System** > **Languages**.
2. Tap **System Languages**.
3. Touch & hold the language you want and drag it to the first position in the list.
4. If you don’t see the language you want, tap ➕ to add it, then drag it to the first position.

   All languages added to the list will appear on the keyboard's spacebar. You can also add languages to the keyboard that aren't system languages.

To remove a language, go to **Settings** > **System** > **Languages**, then tap ⋮ > **Remove**, select the language, and tap 🗑.

Set language for an app

For specific apps, you can select a language that's different than your phone's default language:

1. Go to **Settings** > **System** > **Languages**.
2. Tap **App Languages**.
3. Tap the app's name and select the language to use.

   Not all apps support changing languages.

Set regional preferences

Set your preferences (temperature units, first day of the week) so that apps display information the way you want. Your default preferences are based on your selections for display language and app languages.

To change these preferences:

1. Go to **Settings** > **System** > **Languages**.
2. Tap **Regional preferences**
3. Adjust settings:
   - Tap **Temperature** and select Celsius or Fahrenheit.
   - Tap **First day of week** and select the day to use for calendars and schedules.

Not all apps support regional preferences.

Customize the keyboard

To customize Gboard, just tap in top row of the keyboard.

Or, go to **Settings** > **System** > **Keyboard** > **On-screen keyboard** > **Gboard**.

Add language to keyboard

If you want a keyboard for a language that isn't a display language:

1. On the top row of the keyboard, tap .
2. Tap **Languages**.
3. Tap .
4. Select the language.
5. Tap **Done**.

Then, switch between languages on the keyboard by tapping .

Resize keyboard to type more accurately

Give yourself more space to type and reduce typos by adjusting the height of the keyboard. You can also reposition it for your best fit.

1. On the top row of the keyboard, tap .
2. Tap
3. Adjust sizing:
   - Drag the handles on the frame to increase or decrease the keyboard height.
   - Touch & hold to drag the keyboard up or down.
4. Tap to save changes or to reset to the original size and position.

Tip: Voice typing can also improve typing speed and accuracy.

Change background appearance

1. On the top row of the keyboard, tap .
2. Tap **Theme**.
3. Select a color or landscape to use as the background.
4. Tap **Apply**.

Adjust keyboard sounds or vibration

The onscreen keyboard vibrates when you tap a key. Turn off vibration feedback if you prefer not to use it or want to improve battery life.

To adjust keyboard sounds or vibration:

1. On the top row of the keyboard, tap .
2. Tap **Preferences**.
3. To adjust vibration:
   - Turn **Haptic feedback on keypress** off or on.
   - If on, tap **Vibration strength on keypress** and move the slider.
4. To adjust sounds:
   - To hear sounds when you type, turn **Sound on keypress** on .
   - To adjust how loud the sounds are, tap **Volume on keypress**.

Disable glide typing

With glide typing, you drag your finger over the letters in a word. If you want to turn this off and only use multi-touch typing:

1. On the top row of the keyboard, tap .
2. Tap **Glide typing**.
3. Turn **Enable glide typing** off .

Limit or turn off suggestions

1. On the top row of the keyboard, tap .
2. Tap **Text correction**.
3. Adjust settings:
   - If you don’t want predictions based on your previous word, turn **Next-word suggestions** off . You will only see suggestions for the current word you're typing.
   - If you don’t want ANY suggestions, turn **Show suggestion strip** off .
   - You can also turn off (or on) offensive word blocking and suggestions for emoji, stickers, and information from Contacts.

Turn off auto-correction

1. On the top row of the keyboard, tap .
2. Tap **Text correction**.
3. If you don’t want words corrected while you type, turn **Auto-correction** off .

Change keyboard apps

Your phone comes with Gboard and Voice typing, which you can customize. You can also install different onscreen keyboard and voice typing apps from Play Store, then select the one you want to use in Settings.

Download other keyboards

1. Open Play Store and search for “keyboard”.
2. Read reviews of apps before you install them. Some apps look enticing but are full of frustrating ads.

   You can always uninstall the app if you change your mind.
3. When you find a keyboard app you want, download and install it.

   Most apps walk you through setup screens for your keyboard, and they may also open **Settings** where you turn it on.

Choose which keyboard to use

In Settings, you choose which keyboard to use in all apps where you type with the onscreen keyboard.

To change keyboards, turn on the one you want to use:

1. Go to **Settings** > **System** > **Keyboard**.
2. Tap **On-screen keyboard** to see your list of installed keyboards.
3. Adjust settings:
   - Turn keyboards on or off.

     You can have multiple keyboards on. If multiple are on, you can switch between them when typing: simply tap at the bottom of the keyboard, then select a keyboard.
   - To change settings for a keyboard, tap its name.

Remove keyboards

To remove a keyboard you downloaded, uninstall its app.

You can’t uninstall Gboard and Voice typing, which came with your phone.

Open apps faster, multitask better

To improve performance, your phone can temporarily turn unused storage into extended RAM (temporary memory where your phone puts data it needs to retrieve quickly) when you need extra speed. The result? You can open apps faster and keep more open at the same time for smoother multitasking.

When RAM boost is on, your phone uses internal storage as extended memory, decreasing storage capacity (for photos, files, apps you install).

To allocate storage space for extended memory:

1. Go to **Settings** > **System** > **Performance**.
2. Tap **RAM boost**.
3. If needed, turn it on .
4. Change the size of extended memory if desired.
5. Restart your phone to apply the new setting.

Back up phone

Back up to Google

You can automatically back up the following items to your Google account:

- Apps and app data
- Call history
- Contacts
- Phone settings (including Wi-Fi passwords and permissions)
- Photos and videos (synced to your Google Photos library, not to Google Drive)
- SMS text messages (if using Messages)

Tip: Back up over Wi-Fi to prevent cellular data charges.

Not all apps back up data automatically. Check with the app developer.

To automatically back up to Google Drive:

1. Go to **Settings** > **System**.
2. Touch **Backup**.
3. Check that **Backup by Google One** is on. If needed, turn it on.
4. If you have multiple Google accounts, touch **Account** to select an account.
5. Follow the onscreen instructions.

To back up other files that aren't automatically backed up, like attachments or downloads:

1. Open the Drive app.
2. Touch +.
3. Touch **Upload**, then choose the files or folder to upload.

Manage your backup in Drive

On your phone:

1. Open the Drive app.
2. Touch ≡ > **Backups**.

To learn about managing phone backups from a computer, read Google's help.

Restore backed up data

When you add your Google account to a phone, photos, contacts, settings and app data that you previously backed up to that account are restored onto the phone.

Share your phone

Ways to share your phone

- **Add users.** If you share your phone with family, friends, or within a business, you can set up separate user spaces for each of them.
- **Lend to people as guest.** This is a more temporary space that you or the guest can delete when finished.
- **Pin the screen.** This lets you keep one specific app or screen in view. For example, you can pin a game and your child cannot navigate anywhere else on your phone.

About owners, users, and guests

The owner can:

- Determine whether users and guests can make phone calls and send text messages, which also allows them to see the phone's call history and text history.
- Reset, update, and uninstall any apps.
- Delete user and guests, removing any associated accounts and data from the phone.

Users and guests can:

- Set up Google accounts and other types of accounts.
- Set up a screen lock.
- Customize the home screen and settings for their spaces.
- Add and delete apps for their spaces, and update any apps they use, regardless of who installed them.

Important: To prevent others from switching to your owner profile and accessing your information, set a screen lock before you share your phone with users or guests.

When sharing your phone with users and guests, some apps are only available to the owner, not to other users and guests.

Switch users

Only the owner can switch to the guest profile for loaning the phone and can switch between user profiles.

To switch user profiles or see which is currently active, open quick settings. At the top of the screen, you'll see one of these icons after you've set up a user or added a guest.

Icon	Meaning
	Owner (If you set up your profile in Contacts and included a picture, you'll see it and your name instead.)

Guest

Added user

Add, modify, remove users

Add a user

You must be the device owner to add users.

1. To prevent others from switching to your owner profile and accessing your information, set a screen lock before you share your phone.
2. Go to **Settings** > **System** > **Multiple users**. If needed, turn it on .

   Tip: To add users from quick settings on your lock screen without unlocking the phone, go to **Settings** > **System** > **Multiple users** and turn **Add users from lock screen** on .
3. Tap **Add user** > **Next**.
4. Add the user's name.
5. To allow the user to make calls and send messages, switch on **Turn on phone calls & SMS**.
6. Switch to that user and tap **Set up now**.
7. Give the phone to the new user to set up the profile.

Restrict calls and messages

From your owner profile, you control whether users can call and send texts with your phone:

1. Go to **Settings** > **System** > **Multiple users**.

   Or from quick settings, tap > **Manage users**.
2. Tap the user's name.
3. To prevent the user from making calls or sending messages, switch off **Turn on phone calls & SMS**.

Remove a user

You can remove yourself as a user. You must be the device owner to remove other users.

If you're a user who borrowed a phone:

1. Go to **Settings** > **System** > **Multiple users**.

   Or from quick settings, tap > **Manage users**.
2. Tap and delete your user account from the phone.

If you're the owner:

1. Go to **Settings** > **System** > **Multiple users**.

   Or from quick settings, tap > **Manage users**.
2. Tap the user's name.

3. Tap .

Add or delete guest

Create a temporary guest profile for sharing your phone with someone.

If you need a space for someone to use on a regular basis, where apps and data can be saved, add a user instead of a guest session.

Lend to guest

1. Go to **Settings** > **System** > **Multiple users**. If needed, turn it on .
2. Before you add the guest, adjust settings:
   - To automatically remove any data and apps installed during the session when the guest is finished, turn **Delete guest activity** on .
   - To allow the guest to make calls, turn **Allow guest to use phone** on .

     The guest will be able to see your call history if you turn this on.
3. Tap **Add guest**.
4. Tap the option to switch to guest mode.

End guest session

1. From quick settings, tap .
2. Tap **Exit guest**.

   If you switched off **Delete guest activity** before the session, you'll be asked if you want to delete or save data when exiting the session.

   Otherwise, any data from and apps installed during this session is deleted.

Or:

1. Go to **Settings** > **System** > **Multiple users**.
2. To end the session:
   - To return to the owner's profile, tap **Exit guest mode**.
   - To remain in guest mode but delete all data and apps installed during the last session, tap **Reset guest session**.

Record your IMEI number

An IMEI (International Mobile Equipment Identity) number is a unique code that identifies your phone. Phones with two SIM have two IMEI numbers, one for each SIM. This allows the phone to be identified separately on each network that the SIMs connect to.

You'll need your IMEI number if you contact support regarding a warranty, and it's important to have if your phone is stolen. Service providers can use the IMEI to block a stolen phone from cellular networks, and many police departments keep a record of stolen phones using this number.

You might never need your IMEI number, but it's a good idea to record it, just in case.

To find the IMEI number:

1. Go to **Settings** > **About phone**.
2. See **IMEI** for your SIM.
3. Record and save the number where you can easily access it.

You can also find your IMEI number by dialing ***#06#** in the Phone app. On some phones, the MEID HEX number is your IMEI number.

If your phone doesn't turn on, check the box it came in or the receipt for the IMEI number.

Find legal and product information

To view the electronic regulatory label for your phone, go to **Settings** > **About phone** > **Regulatory labels**.

For safety, environmental, warranty, and other legal information, go to **Settings** > **About phone** > **Legal information**.

Printed legal information may also be provided with your phone.

To find your phone's model or serial number, go to **Settings** > **About phone** > **Model** > **Model Number (SKU)**.

Phone is slow or unstable

If **a certain app is slow**, try these app-specific troubleshooting steps.

If your phone is slow **when viewing online content**, it could be an issue with your connection. If you're on Wi-Fi, use a different Wi-Fi network, switch to mobile data, or contact your Internet Service Provider. If you're using a mobile connection, switch to Wi-Fi.

If **all apps are slow**, it's probably an issue with your phone, not an app on your phone. Try these troubleshooting steps. After each step, check to see if the issue is fixed:

1. Turn your phone off and then on again.
   - If your phone is frozen, reboot it by pressing and holding the Power button for 7-10 seconds.
2. Check for system updates.

   Go to **Settings** > **System updates**.
3. Check for app updates.

   Open the Play Store app and touch your profile icon > **Manage apps & device**.
4. Check available storage and clear space if needed.

Phone feels warm or hot

Overview

It's normal for your phone to feel warm, or even hot, depending on how you're using it.

If your phone gets hot, it will slow charging, reduce brightness, and limit other functions until it cools down, or automatically shut off if it gets too hot.

If your phone is too hot to touch, use a different phone, tablet, or computer to contact Motorola support.

Reasons your phone may get warm

- Playing graphics-intensive games in high performance mode for an extended period
- Using GPS navigation
- Tethering or using your phone as a Wi-Fi hotspot
- Using phone while it's charging
- Fast charging with a high-wattage or wireless charger
- Downloading or uploading large amounts of data, such as during initial setup when copying data from your old phone, backing up or restoring data, or downloading and updating multiple apps
- Taking multiple photos or recording high-resolution videos for an extended time
- Using your phone in areas with weak signals for an extended period

Ways to keep your phone from heating up

- Pause resource-intensive features or apps until your phone cools down
- Use the charger that came with your phone, or a charger that is compatible with your phone
- Keep your phone away from direct heat sources like electric blankets, heaters, hot air vents, or excessive sunlight
- Don't charge or use your phone in enclosed or poorly ventilated places, such as on a pillow or blanket, where heat can quickly accumulate
- Lower your phone's display brightness

If you're not using or charging it

Sometimes a process can get stuck in the background. If your phone is hot but you're not using or charging it, turn your phone off and on again. This will stop the previously stuck process and resolve the issue.

Phone won't turn on

If your phone isn't starting, has a black or blank screen, or turns on but immediately turns off, try these steps to fix the issue.

1. Press & hold the Power button for 5-7 seconds, or up to 30 seconds.

   This restarts (reboots) your phone.

2. Charge the phone.

   If your phone has a sign-of-life indicator look for a white light near the top front of the phone. This indicates that the phone is charging but battery is too low to power the screen.

   If you're having problems charging, try these troubleshooting steps.

3. If you don't see a battery icon after you, plug your phone in to charge, the issue could be with your screen. Check if your phone rings by calling it from another phone. If it rings, the issue is with your screen and you can try these troubleshooting steps.

4. Perform an external reset of your phone. Learn how.

5. If you have a Windows PC, download Software Fix to your PC and try reinstalling the phone's system software.

Phone restarts or crashes

If your phone randomly reboots, restarts, or shuts down without restarting, try the following.

1. Restart your phone:
   a. Hold down the Power button for about 30 seconds.
   b. If this doesn't work, connect your phone to charge for at least 5 minutes. Then, while connected to the charger, restart again by holding down the Power button for 30 seconds.
2. Troubleshoot your phone:
   a. Check if a software update is available for your phone.
   b. Check available storage and clear space if needed.

      You may see issues if your phone's internal storage is almost full. To free up space, remove unnecessary files and clear cached data.
3. Troubleshoot your apps:
   a. Check for app updates.
   b. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.

      If your problem doesn't go away in safe mode, restart your phone and continue to the next section.
4. Reset to factory settings:

   To remove any processes on your phone that may be causing the issue, you can reset your phone to factory settings.

   A factory data reset will remove all data from your phone.
5. If you have a Windows PC, download Software Fix to your PC and try reinstalling the phone's system software.

Screen is frozen or won't respond

Tip: If your screen goes black when the phone rings so you can't answer the call, clear data for the Phone app.

If your screen lags or blurs motion between actions, raise your refresh rate.

If your phone freezes, stops responding, or is stuck on a blank or white screen, try the following:

1. Restart your phone. Hold down the Power button for about 30 seconds.
2. If this doesn't work, charge your phone for at least 5 minutes. Then, while connected to the charger, restart again by holding down the Power button for 30 seconds.

If your phone freezes again, check for a larger issue:

1. Restart your phone to unfreeze it.
2. Check if a software update is available for your phone.
3. Check available storage and clear space if needed.

   You may see issues if your phone's internal storage is almost full. To free up space, remove unnecessary files and clear cached data.
4. Check for app updates.

If you can't unfreeze the phone, reset your phone to factory settings, to remove any processes that may be causing the issue.

A factory data reset will remove all data from your phone.

Screen displays wrong colors

Everything is grayscale, black and white

Go to **Settings** > **Digital Wellbeing & parental controls** > **Bedtime mode** > **Customize** > **Screen options at bedtime** and turn **Grayscale** off .

Everything is negative, reversed colors

Go to **Settings** > **Accessibility** > **Color and motion** > **Color inversion** and turn it off .

Learn more.

Tones, hues are different or missing

- If certain colors appear diminished or their hues are different, go to **Settings** > **Accessibility** > **Color and motion** > **Color correction** and turn **Use color correction** off .

Background turned dark/light

Go to **Settings** > **Display** and turn **Dark theme** off .

Screen brightness automatically too dim or bright

Adaptive brightness uses the ambient light sensor and machine learning to adjust your display brightness automatically. When you change the brightness slider, your phone learns your preferred levels for various lighting environments. Ideally, you'll need to use the slider less and less.

If Adaptive brightness stops working as desired, you can reset it to retrain the system.

1. Go to **Settings** > **Apps** > **All apps**.
2. Tap ⋮ > **Show system apps**.
3. Search for "Device Health Services" then tap **Device Health Services**.
4. Tap **Storage & cache** > **Clear storage** > **Reset adaptive brightness**.

If you prefer to manually adjust brightness, go to **Settings** > **Display** > **Adaptive brightness** and turn **Use adaptive brightness** off .

If Battery saver is on, the screen dims when the battery gets low.

SD card issues

Phone doesn't recognize new SD card

If your phone isn’t recognizing a new card that you inserted, try these steps. After each step, check to see if the issue is fixed.

1. Turn your phone off and then on again.
2. Inspect card for damage or alignment issue:
    a. Turn your phone off and remove the card. Inspect for damage. If not damaged, reinsert the card.
    b. Be sure the card sits completely in its slot and that the tray slides easily into the phone.
    c. Turn the phone on.
3. Check that the card is mounted:
    a. Go to **Settings** > **Storage**.
    b. Touch ▾ and select your SD card.
    c. Touch ⋮ > **Mount**.
    d. Turn your phone off and then on again.
4. Check that the card’s type and capacity is compatible with your phone. If not, use a different SD card that meets the requirements.
5. Insert a different SD card to confirm that the issue is with the original card and not with your phone.

Phone can't format SD card

Try the following:

- Check that the card’s type and capacity is compatible with your phone. If not, use a different SD card that meets the requirements.
- Try formatting the card using an SD card reader and an SD card formatter app on a Windows computer.

Phone stopped reading SD card

After each step, check to see if the issue is fixed:

1. Turn your phone off and then on again.
2. Inspect card for damage or alignment issue:
    a. Turn your phone off and remove the card. Inspect for damage. If not damaged, reinsert the card.
    b. Be sure the card sits completely in its slot and that the tray slides easily into the phone.
    c. Turn the phone on.

3. Check that the card is mounted:
   a. Go to **Settings** > **Storage**.
   b. Touch ▾ and select your SD card.
   c. Touch ⋮ > **Mount**.
   d. Turn your phone off and then on again.
4. Use another device to check if the card is readable:
   a. Insert card into another device.
   b. If that device can read the card and files are present, back up files to your computer.
5. Check for errors with a USB SD card reader connected to a Windows computer:
   a. Insert the card into a USB card reader.
   b. Open My Computer, right-click on the SD card, and select **Properties** > **Service** > **Check disk for errors**. Depending on the size of your card and usage, this process could take up to an hour.
6. Reformat card using an SD card reader and an SD card formatter app on a Windows computer. Formatting the card erases all data on the card. Before you reformat, if you can access your SD card files from your PC, copy them to your computer. Then, use the SD card formatter app to format your card to FAT32.
7. Try a new SD card.

Apps can't view files on SD card

If none of your apps can view files on the card:

1. Install a different file manager app from Play Store. Use that app to check if files are visible on the card.
2. Check if files are visible using a Windows computer:
   a. Turn your phone off and remove the card.
   b. Put the card in the computer's SD card slot or a connected USB SD card reader.

If a specific app can't view files the card:

1. Open the app from which files are missing.
2. In the app's settings, set the storage location to be the SD card, not internal or phone memory.

Computer can't view files on SD card

After each troubleshooting step, check to see if your issue is fixed:

1. Use a USB cable that's capable of data transfer and isn't for charging only.
2. Be sure you have set the USB connection type to allow file transfer.

Troubleshoot issues with calls

Select the statement that best describes your issue:

- Can't make calls
- Can't answer calls
- Phone doesn’t ring
- People can’t hear me
- Can't hear calls
- Don’t get calls/texts
- Screen goes black
- Calls drop

Can't make calls

After each troubleshooting step, check to see if your issue is fixed.

Phone app icon is missing

If disappeared from your home screen, you just need to add a shortcut for the Phone app.

SIM card not recognized

If you see or in the status bar or a message that the SIM is not recognized:

1. Turn your phone off and then on again.

   Press the **Power** + **Volume up** buttons simultaneously, then touch **Restart** to establish a new connection with the network.

2. Do one of the following:

   - If your phone allows one SIM card, turn your phone off, then remove and reinsert the SIM.
   - If your phone allows dual SIMs, disable the SIM, then enable it again. Go to **Settings** > **Network & internet** > **SIM preferences**. Turn the SIM off . Then turn it on .

     If one of the two SIMs is working, remove the SIM that is not recognized and try it in the other SIM slot. If it doesn't work in the other SIM slot, then the issue is with the SIM card and you need a replacement from your carrier.

3. Contact your carrier to make sure your account is set up properly.
4. Ask your carrier to replace the SIM card.
5. Perform an external phone reset.

No signal

1. If you usually have a signal but the status bar shows in your current location, move to another area where you can receive a signal, like outdoors. If you're uncertain whether your carrier provides service in that location, check the coverage map on your carrier's website.
2. If airplane mode is on, turn it off.
3. Turn your phone off and then on again.
4. Check for app updates.
5. Check if a software update is available for your phone.
6. Remove your SIM card and reinsert.
7. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.
8. Reset the phone.

Have signal, but can’t make calls

1. Turn your phone off and then on again.

   Press & hold the **Power** + **Volume up** buttons simultaneously, then touch **Restart** to establish a new connection with the network.

2. Clear the cache for the Phone app.
3. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.
4. Check if a software update is available for your phone.
5. Reset the phone.

Consistent busy signal

Outbound calls

1. If you hear a fast busy signal when you call a number, all cellular circuits may be in use, preventing the call from going through. Try calling again later.
2. If you hear a fast busy signal every time you call the same number, your number may be blocked by an app. Try calling from a different number.

Incoming calls

If you have a signal and can make calls, but callers tell you they consistently get a busy signal when calling you, check that you haven’t blocked their numbers.

Can't answer or phone doesn't ring

After each troubleshooting step, check to see if your issue is fixed.

Phone doesn’t ring or ring loud enough

1. Check your volume setting.
2. Look for ⛔ in your status bar. If you see it:
   - Open quick settings and touch ⛔ to turn Do Not Disturb off. Your phone will ring for incoming calls.
   - Make sure your phone is set to screen calls at the appropriate times.
3. Check that your ringtone is not set to **None**.
4. Is your phone connected with a Bluetooth device? If so, all audio is routed to the Bluetooth device.
5. If you're using a ringtone that you installed, try using a ringtone that came with the phone.
6. Use safe mode to see if apps you installed are causing the issue and uninstall as needed. Begin with application types like launchers, task killers, or anti-virus apps.

Can't answer ringing phone

1. Clear the data for the Phone app.

   Touch & hold 📞, then touch ⓘ > **Storage & cache** > **Clear storage**.

Consistent busy signal

Outbound calls

1. If you hear a fast busy signal when you call a number, all cellular circuits may be in use, preventing the call from going through. Try calling again later.
2. If you hear a fast busy signal every time you call the same number, your number may be blocked by an app. Try calling from a different number.

Incoming calls

If you have a signal and can make calls, but callers tell you they consistently get a busy signal when calling you, check that you haven’t blocked their numbers.

Don’t get calls/texts

1. If airplane mode is on, turn it off.
2. Turn your phone off and then on again.
3. Check for updates to your phone and messaging app.
4. Check if a software update is available for your phone.

Calls go to voicemail

Check your **Do Not Disturb** settings:

1. Look for ⛔ in your status bar. If you see it, then your phone is sending calls to voicemail so you're not interrupted. To have your phone ring for incoming calls, open quick settings and touch ⛔ to turn off Do Not Disturb.
2. Check your schedules for Do Not Disturb and delete any you don't want.
3. If you're using Bedtime mode but don't want to send calls to voicemail when you're sleeping, touch **Settings** > **Digital Wellbeing & parental controls** > **Bedtime mode** > **Customize** and turn **Do not Disturb for Bedtime mode** off.
4. You can start Do Not Disturb by placing your phone face down on a surface. If you don't want to send calls to voicemail when your phone is face down, go to **Settings** > **Sound & vibration** > **Flip for DND** and turn it off.

Issues during calls

After each troubleshooting step, check to see if your issue is fixed.

Screen goes black

1. If you are using a case, cover or screen protector, remove it and see if it was causing the issue.
2. Check your proximity sensor.

   Dial a call and set the phone on a table (don't use speaker mode), then hold your hand over the proximity sensor to see if you can turn the screen off and on.
3. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.

Calls are dropping

1. Check your signal strength:
   - Weak signal from your cellular provider is a common cause of dropped calls. In the status bar, see how many bars your network connection has. If you see only one or two bars, change locations to improve your signal strength, particularly if you are indoors.
2. Turn your phone off and then on again.

   Press & hold the **Power** + **Volume up** buttons simultaneously, then touch **Power off**. Then turn it on to establish a new connection with the network.
3. During a call, check that the proximity sensor works by covering it to confirm that it turns off your screen, preventing accidental touches during calls. You can also download an app to automatically lock your screen during calls; search for “call screen lock” on Play Store.
4. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.
5. Check if a software update is available for your phone.
6. Reset the phone.

People can’t hear me

People can't hear me on calls

1. Check that nothing is covering the microphone:
   - If you are using a case, cover or screen protector, remove it and see if it was causing the issue.
   - Check that the protective film that ships with the phone has been removed.
2. Check to see if your phone is using Voice privacy. (This feature is not available on all models.) Turn it off to see if sound quality improves:

   a. Tap .

   b. Tap > **Settings** > **Calls**.
3. If the issue occurs while using the speakerphone or a Bluetooth headset, check your signal strength.

   In the status bar, see how many bars your network connection has. If you see only one or two bars, change locations to improve your signal strength, particularly if you are indoors.

4. Turn your phone off and then on again.

   Press & hold the **Power** + **Volume up** buttons simultaneously, then tap **Restart** to establish a new connection with the network.

5. Check if a software update is available for your phone.
6. Turn off Voice Match.

   a. Open the Google app.

   b. Tap your profile icon > **Settings** > **Assistant** > **Hey Google & Voice Match**.

   c. Turn **Hey Google** off .

   Saying “OK, Google” won't work from all screens, but you can tap the search widget first, then say “OK, Google”.

7. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.
8. Reset the phone.

People can’t hear me on apps like Meet or WhatsApp

1. Force stop the app. This completely shuts down the app, including any background services that may be causing your issue.
2. Check for updates to the app.
3. Turn your phone off and then on again.
4. Clear the app's cache.

Poor sound quality on calls

Start by checking your volume (**Settings** > **Sound & vibration** > **Call volume**).

How are you listening to the call?

Wired headset

1. Make sure the headset is inserted completely into the headset jack.
2. If you are using a case or cover, remove it and re-insert the headset to see if it was interfering.
3. Try a different headset to determine if the issue is with the original headset.

Earpiece

1. Check that nothing is covering the microphone:

   - If you are using a case, cover or screen protector, remove it and see if it was causing the issue.
   - If the phone was shipped with a protective plastic film, remove the film.

2. While in a call, try using the speakerphone or a wired headset to see if the sound quality improves. If it doesn’t, the issue is probably network signal strength instead of hardware.
3. Turn your phone off and then on again.

   Press & hold the **Power** + **Volume up** buttons simultaneously, then tap **Restart** to establish a new connection with the network.

4. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.

5. Check if a software update is available for your phone.
6. Reset the phone.

Connected Bluetooth device

Check the battery level of Bluetooth device and phone, and charge if necessary. Paired Bluetooth devices may disconnect or create noise when the phone or Bluetooth battery are low.

Charging issues

Try these troubleshooting steps. After each step, check to see if your issue is fixed.

1. Make sure the USB plug fits securely into the phone.
2. If the battery is completely depleted, connect the charger and wait about 10 minutes until it has enough voltage to charge, then press the Power button.
3. If you're charging by connecting to a wall outlet:
   - If the outlet is controlled with a switch, check that it is turned on.
   - Use the charger that came with the phone, or a charger that is compatible with your phone.
   - Remove any case, to see if it's impeding the charger/port connection.
   - Inspect the charger for damage to the wire or plug. If you see damage, try charging by connecting to your computer with a USB cable.
   - Check the outlet for damage or loose parts. If you see damage, try another outlet.
4. If you're charging by connecting to your computer, check the USB connection:
   a. Swipe the status bar down.
   b. On the USB notification, tap ⌄, then tap the notification.
   c. Tap **No data transfer**.
5. Reboot the phone by holding the Power button for 7-10 seconds.
6. Reset the phone.

Phone gets hot while charging

The TurboPower charger, which provides efficient, rapid charging can cause the battery to heat up, which is normal. If the battery reaches 111 degrees (F), the charging rate slows down. Once the battery cools down, the charger begins rapid charging again.

TurboPower charging not working

When the battery is below 78%, the TurboPower charger charges rapidly. When the battery is at 78% or higher, it charges at regular speed.

If your battery is below 78% and isn’t charging rapidly, disconnect your phone from the charger and plug it back in again.

Battery drains too fast

Battery life varies

The way you use your phone can really affect how long you can go before recharging your battery. Navigating, playing games, browsing the web, making calls and texting all require energy. So, your battery life may vary day to day, depending on what you're doing.

If your battery is draining faster than expected

If your battery life seems shorter than usual, a quick and easy step is to reboot your phone, especially if you haven't turned it off in longer than a week.

1. Press & hold the **Power** + **Volume up** buttons simultaneously.
2. Touch **Restart**.
3. Plug your phone in and charge it normally.

Tips:

- Adjust settings to extend your battery life
- Check your phone's battery health to determine if it's time to replace the battery

Bluetooth issues

Bluetooth turning on automatically

After each step, check to see if your issue is fixed:

1. When Bluetooth is off, your phone can still scan and automatically connect to a previously paired device. To prevent this, turn off Bluetooth scanning.
2. Some third-party apps that control Bluetooth devices (smart watches, fitness and vehicle monitors, etc.) automatically turn Bluetooth on. If they do, this can prevent you from turning Bluetooth off.

   To check if a third-party app you installed is automatically turning Bluetooth on, use safe mode to identify the problematic app, then uninstall it.

Can't pair

After each step, check to see if your issue is fixed:

1. First, check the basics.
2. Make sure the phone and Bluetooth device are in discovery mode.
3. Refresh the available devices list:
   a. Go to **Settings** > **Connected devices**.
   b. Touch **Pair new device**.
4. Check if a software update is available for your phone.
5. If you're having trouble pairing with your car, see the car manufacturer's instructions for your model.
6. Reset the phone's connections, then power cycle the phone.

Can't reconnect previously paired device

Unpair the Bluetooth device, then pair it again:

1. Go to **Settings** > **Connected devices**.
2. Next to the paired device, tap ⚙ > **FORGET**.
3. Pair the device again.

Can't hear music

After each step, check to see if your issue is fixed:

1. First, check the basics.
2. Check that the volume is up on your phone and car or Bluetooth device.
3. Check that other devices paired with your phone aren't playing the music.

4. Check that **Media audio** is on:
   a. Go to **Settings** > **Connected devices**.
   b. Next to the paired device, touch ⚙.
   c. Make sure **Media audio** is checked.
5. If the problem is with a car, check the car's instructions.

Can't make or hear on calls

After each step, check to see if your issue is fixed:

1. Check that other devices paired with your phone aren't getting your calls.
2. Check that **Phone audio** is on:
   a. Go to **Settings** > **Connected devices**.
   b. Next to the paired device, touch ⚙.
   c. Make sure **Phone audio** is checked.
3. If the problem is with a car, check the car's instructions.

Connection drops

After each step, check to see if your issue is fixed:

1. Check battery level on your phone and on the Bluetooth device and charge if needed. Bluetooth devices may disconnect or create noise when the phone or Bluetooth battery is low.
2. Adjust positioning:
   - Make sure you are wearing or positioning the device appropriately.
   - Keep metal objects, such as keys or coins, away from the phone and device to avoid interference.
3. Clear data for this system app:
   a. Go to **Settings** > **Apps**, then touch **All apps**.
   b. Touch ⋮ > **Show system apps**.
   c. Touch **Bluetooth** > **Storage & cache** > **Clear storage**.

Paired device can't see contacts

Check that contact sharing is on:

1. Go to **Settings** > **Connected devices**.
2. Next to the paired device, touch ⚙.
3. Make sure **Contact sharing** is on.
4. Check and adjust sharing settings on the paired device or in the device's app.

Fix it: Check the basics

After each step, see if your issue is fixed:

1. Check battery level on your phone and Bluetooth device, and charge if either is low.
2. Keep the phone and Bluetooth device within 30 feet of each other, closer for better performance.
3. On your phone, turn Bluetooth off and then on again.
4. Turn off the Bluetooth device to disconnect it. Then turn it back on to automatically reconnect with the phone.
5. Power cycle both your phone and the Bluetooth device.

If that doesn't fix it, follow the steps for specific problems in the sections above.

Wi-Fi issues

After each troubleshooting step, check to see if the issue is fixed.

Can't connect to a network

1. When you enter the password to connect:
   - Get the password from the Wi-Fi router and make sure you enter it correctly on your phone.
   - If the **Connect** button is greyed out, the password you entered isn’t long enough. Confirm the router’s password and re-enter it on your phone.
2. Check if a software update is available for your phone.
3. Check that the Wi-Fi router firmware is up to date.
4. Reset the phone’s network connections.
5. Reset the phone.

Connection drops

After each troubleshooting step, check to see if the issue is fixed.

1. Turn off Wi-Fi scanning.
2. Remove the network connection. Then set up the Wi-Fi connection again.
3. Check if a software update is available for your phone.
4. Restart your wireless router by unplugging it from the power outlet for about 30 seconds and then plugging it back in. Once the wireless router is running again, try to reconnect.
5. On a computer, log into your router and try adjusting one or more of these router settings:
   - If the router has multiple bands, disable the lower band.
   - Change the encryption/security setting of the SSID from WPA-password to WPA-PSK.
   - Don't use automatic channel selection. Instead, assign a fixed channel, such as Channel 6.
6. Reset the phone’s connections.

Hotspot problems

If you can't turn your hotspot on, check that:

- Cellular data is on.
- Data Saver is turned off.

If you can't connect a computer or tablet to your phone's Wi-Fi hotspot:

1. The cellular network for your phone may not be in range. Check the signal icon in your status bar to ensure you have strong connection. If not, try these troubleshooting steps.
2. Re-enter the password on the device to match the hotspot password set up on your phone. Make sure that the encryption type and security settings match on the device and your phone.

3. Disconnect and then reconnect:
    a. Turn off the connection from your device.
    b. Turn off the phone's hotspot.
    c. Restart your device.
    d. Wait for 1 minute, then turn on and enable the hotspot on your phone.
    e. Reconnect the device.

If you've connected a computer or tablet but can't access certain web sites:

1. Power cycle your computer or tablet.
2. Make sure the browser version is up to date.

Can't transfer files or connect USB to computer

If you're having problems using a USB connection to connect your phone to your computer, try these troubleshooting steps.

Check your USB connection

- On your phone, check that your USB connection is set to File transfer mode.
- Try a different USB cable. Not all USB cables can transfer files.
- If your phone detected moisture in the USB port, which can occur in high humidity environments or if the phone came in contact with water, unplug the phone, wipe it dry, and gently shake it about 10 times with the USB port facing downward to remove moisture. Place it on a cloth to air dry, or use a fan to help dry it faster.
- To test the USB port on your phone, connect your phone to a different computer.
- To test the USB port on your computer, connect a different device to your computer.
- To connect your phone to a car, projector, or other device, refer to the user manual that came with the device.

Check your computer

Windows PC

1. On your PC, check that **Settings** > **Advanced system settings** > **Hardware** tab > **Device installation settings** is set to automatically detect and install drivers for new devices.
2. Restart your PC.

Mac computer

1. Check that your computer is running Mac OS X 10.5 or later.
2. Check that your computer has Android File Transfer installed and open.
3. Restart your computer.

Check your phone

1. Check if a software update is available for your phone.
2. Turn your phone off and then on again.

   Press & hold the **Power** + **Volume up** buttons simultaneously, then tap **Restart**.

Forgot unlock code

If you forgot your PIN, pattern, or password for unlocking your screen, you need to erase your phone, set it up again, and set a new screen lock.

1. Make sure you know your Gmail address and password, which you'll need when setting up the phone. If you've forgotten them, use Google's website to retrieve them.
2. Perform an external reset of your phone.

Can't sign in to Google

If you’ve forgotten the Gmail address and password for your Google account:

1. Visit Google’s website to reset the password.
2. On a computer, log in to Gmail and confirm that the new password works.
3. Wait 24 hours after changing your password before resetting your device. For security, you can't use an account to set up a phone after reset if that password changed within 24 hours.

Account sync issues

If your account is having problems syncing, you may see a message or an icon.

In most cases, these issues are temporary and your account will sync again after a few minutes. If you keep having sync issues, try the solutions below.

Sync account manually

1. Go to **Settings** > **Passwords & accounts**.
2. Touch the account to sync.
3. Touch **Account sync**.

If your phone syncs, your issue is fixed. If not, try the troubleshooting solutions below.

Basic troubleshooting

After each troubleshooting step, try manually syncing to test if sync works.

1. Check that auto-sync is on.
   a. Go to **Settings** > **Passwords & accounts**.
   b. Touch the account.

      by the account name means that some or all of the account's information is configured to auto-sync.

      by the account name means that the account will not auto-sync.
2. Make sure your Internet connection works.

   For sync to work, you need an Internet connection. To test if your connection is working, open a browser and load a website. If the website doesn't load, get help connecting to Wi-Fi or to cellular data.
3. Check if you have account issues.

   For sync to work, you need to be able to sign in to your Google account. Make sure that you can sign in to your account in other ways and on another device. For example, try checking your Gmail with your computer's browser.

   - If you can sign in, the issue is with your phone. You can move on to the next solution.
   - If you can't sign in, your account may have an issue.
4. Check if a software update is available for your phone.

Advanced troubleshooting

After each troubleshooting step, try manually syncing to test if sync works.

1. Remove and re-add your account.

2. Clear cache and data for the Contacts app.
   a. If you've saved any contacts since you last synced, back them up. Open the **Contacts** app, then tap **Organize** > **Export**. Then export to a VCF file and email the file to yourself.
   b. Clear the cache and data for the Contacts app.
   c. Download the VCF file that you emailed to yourself, then import those contacts (**Contacts** app > **Organize** > **Import**).

App or widget issues

App or widget missing from home screen

If a widget disappeared from your home screen, then add the widget by touching & holding an empty spot on your home screen.

If an app disappeared from your home screen, the shortcut for opening the app was removed and you just need to add a shortcut.

If an app disappeared from your list of all apps, you need to reinstall it.

App icons being replaced in favorites

If the apps in your favorites tray are being replaced by apps you haven't selected and you don't want them to change, turn off app suggestions.

1. Touch & hold a blank space on your home screen.
2. Tap **Home settings** > **Home screen style**.
3. Next to **App tray**, tap .
4. Turn **Suggestions on Home screen** off .

App crashes, won’t open, or isn’t working

After each step, check to see if the issue is fixed:

1. Turn your phone off and then on again.

   Press & hold the **Power** + **Volume up** buttons simultaneously, then tap **Restart**.
2. Check that you have not disabled permissions for the app. If any permissions are turned off, turn them on and try using the app again.
3. Update the app.
4. Force stop the app. This completely shuts down the app, including any background services that may be causing your issue.
5. Clear the app’s cache. This frees up space by removing temporary files.
6. Clear the app’s data. This erases all data saved in this app.
7. Contact the app’s developer.
   a. Open the Play Store app.
   b. Touch your profile icon M > **Manage apps & device**.
   c. Touch the app and swipe down to see contact information.
8. If all else fails, delete the app.

Tip: To figure out which third-party app is causing performance problems, use safe mode.

App is slow to open

If you experience a lag when opening an app, turn on performance settings.

App disabled in safe mode

If apps are disabled because you're in safe mode, you can't use them until you exit safe mode.

To exit safe mode, turn your phone off and then on again.

If you can't update apps

If you see apps waiting to update that are stuck in "Pending" status, update the Chrome app first.

1. On the "Pending downloads" screen, cancel all downloads.
2. Swipe to **Chrome** and tap **Update**.
3. After Chrome has updated, touch **Update all**.

   Apps will now update normally.

Problems with app you installed

After each step, check to see if the issue is fixed:

1. Check for updates to the app.
2. If you can open the app, touch or > **Help** and look for troubleshooting information.
3. Clear the app's cache.
4. Go to the developer's website for support.
   a. Open the Play Store app.
   b. Touch your profile icon > **Manage apps & device**.
   c. Touch the app and swipe down to see a link to the website.

Camera issues

Photo looks blurry

Wipe the lens clean with a soft, dry cloth and retake the photo.

If new photos still look blurry:

- Increase resolution (photo size) in the Camera app. A smaller photo size results in lower image quality.
- Avoid zooming when taking a photo. Pixelation always occurs when you zoom a digital photo. If you use zoom during the shot itself, pixelation will be more evident.
- If you're indoors and taking a panoramic photo, switch to regular mode. Panorama works best for outdoor shots; the algorithm that stitches the images together isn't optimized for indoor, up-close shots.

Accidentally deleted photos

You can try to recover recently deleted photos.

If recovered, be sure to back up your photos to the cloud.

Can't delete photo

If a photo or video you deleted comes back, check if it's on your SD card. To delete it, use the Files app. (If you don't have this app, download a file manager app and use it to delete the photo from your card.)

Or, remove your card from the phone and use a computer to delete photos from the card.

WhatsApp camera issues

If you installed WhatsApp and have problems taking photos or videos with it:

1. Check for updates to the app.
2. Clear the app's cache.
3. If the problem continues, open WhatsApp, touch ⋮ > **Settings** > **Help**, and search for information about your issue.

Error: Please restart Camera to continue

After each troubleshooting step, check to see if the issue is fixed:

1. Turn your phone off and then on again.
2. Clear the cache for the Camera app.
3. Check for updates to your Camera app.
4. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.

   If the camera works correctly in safe mode, a third-party app is probably causing the issue.
5. If you're storing photos/videos on your SD card, remove the card and see if you can take photos without getting the error. If so, replace the SD card with a new card. Make sure the new card is certified A1 and has a fast write speed.

Error: Camera Busy

This error can occur if you use the camera in one app and then switch to another app that requires permission to access the camera.

After each troubleshooting step, check to see if the issue is fixed:

1. Turn your phone off and then on again.
2. Check which apps have permission to access the camera.

   Settings > **Apps** > **Camera**

   Review the list of the apps on your phone that request camera access and remove access for apps that look suspicious or that you don't use.
3. Clear the cache and data for the Camera app.

Error: Trash is full

If you're getting messages about the trash being full:

1. Open the **Photos** app.
2. Touch **Collections** > **Trash**.
3. Touch > **Empty trash**.
4. Touch **Delete permanently** to confirm the deletion.

Messaging issues

If you’re having issues sending or receiving messages, try the following:

1. Check for updates to your messaging app.
2. Check if a software update is available for your phone.
3. Turn your phone off and then on again.
4. If the issue persists, follow the steps below for specific issues. After each troubleshooting step, check to see if your issue is fixed.

Red ! on text message

If you see , your text message was not sent.

1. Check your signal strength.

   Weak signal from your cellular provider is a common cause of unsent messages. In the status bar, see how many bars your network connection has. If you see only one or two bars, change locations to improve your signal strength, particularly if you are indoors.

2. Open the conversation and resend the message.

Can't hear notifications

1. Check that message notifications are turned on.
2. Look for in your status bar. If you see it:

   - Open quick settings and touch to turn Do Not Disturb off.
   - Make sure your phone is set to screen calls at the appropriate times.

3. If you're using a 3rd party launcher, switch back to the Moto launcher. If this fixes the issue, then find an alternative launcher to use.

Can't send or receive messages

1. Change your preferred network to **Global**. (Not all carriers support this feature.)
2. If you recently switched from iPhone and are having trouble sending messages to or receiving them from an iPhone, your phone number may still be associated with iMessage. You need to deregister your account.
3. Contact your carrier.

Can't send or receive pictures or videos

Check that:

- Cellular data is turned on.
- Your data plan supports MMS (multimedia messages).

Messages app stopped

1. Check that you have not disabled permissions for the Messages app. If any permissions are turned off, turn them on and try using the app again.
2. Force stop the app. This completely shuts down the app, including any background services that may be causing your issue.
3. Uninstall any recent app updates.

   Touch & hold , then tap **App info** > > **Uninstall updates**.
4. Clear the app's cache. This frees up space by removing temporary files.
5. Reset the phone.

Keyboard not working

If your keyboard has problems, like a missing spacebar:

1. Check for updates to your keyboard app.
2. Turn your phone off and then on again.
3. Clear the cache for the keyboard app.

Problems with Facebook, WhatsApp, other apps

If you're having problems with messaging apps that you installed:

1. Check for updates to the app.
2. If you can open the app, touch or > **Help** and look for troubleshooting information.
3. Turn your phone off and then on again.
4. Clear the app's cache.

Gmail issues

For help with Gmail, read Google's troubleshooting information.

Play Store issues

For help with Play Store, read Google's troubleshooting information.

Update Android software

For best performance, keep your phone updated with the latest available Android software.

Check Android version number

To check what version of Android your phone is running:

1. Go to **Settings** > **About phone** > **Device details** > **Android version**.
2. The number displayed is your phone's Android version.

Install Android software updates

Your phone notifies you if an Android software update is available.

To manually check for updates, go to **Settings** > **System updates** > **Check for updates**.

If an upgrade is available, follow the onscreen instructions to install it.

Tips:

- To save data charges, use a Wi-Fi connection to download software updates.
- For safety reasons, your phone may download security updates (not OS upgrades) automatically over your mobile network if Wi-Fi is not available within a few days after you receive a notification that a security update is available. In this case, data charges may apply depending on the carrier.

You can't downgrade to a previous software version after installing an update.

Check if and when updates are available

Types of updates:

- **Security updates** contain fixes and improvements from Google for your current version of the Android operating system. Motorola provides these updates to most phones on a regular basis.
- **Android OS updates** are new versions of the Android operating system. Motorola provides OS updates from Google to eligible phones as soon as possible.

To see if an OS update will be available for your phone, or if your phone is still eligible for security updates, see the software update website for your country. Our support agents get their Android update information from here too. If the website doesn't have a update release date for your phone, then we don’t know the release date yet.

For Android OS updates, with several phone models, regions, and distribution channels we may have hundreds of software versions to test before releasing an update to your phone. Because dependencies on carriers and other key partners for certifications, independent testing, and requests for changes take more time, all phone owners don't receive updates at the same time, even in the same region.

Reset connections, settings, or apps

Try these resets if you're having issues with specific features on your phone. If the reset doesn't resolve issues, you can take the larger step of resetting your phone.

Reset Wi-Fi, cellular data, and Bluetooth

Use this reset if:

- Wi-Fi doesn't work. Wi-Fi network name doesn't show on your phone.
- Cellular/mobile data: No signal and in the status bar. You can't make/receive calls, or calls frequently drop.
- Bluetooth doesn't work or disconnects automatically.
- VPN doesn't work as expected.

What gets deleted/removed when you reset

- All Wi-Fi devices and passwords set up on your phone
- All cellular/mobile settings, like preferred cellular network
- All paired Bluetooth devices set to connect with your phone, like ear buds, car audio, speakers
- All VPN configurations set up on your phone

You cannot choose individual connections to reset; they will all reset.

Reset

If you're having problems with connections, review this information first:

- Wi-Fi
- Bluetooth
- Cellular data
- Hotspot (internet sharing)

Then, if you're still experiencing problems, try resetting all network settings:

1. Go to **Settings** > **System** > **Reset options**.
2. To reset your network connection, tap **Reset Mobile Network Settings**.

   If you're using dual SIMs, select the SIM to reset for mobile data settings.
3. To reset other connections, tap **Reset Bluetooth & Wi-Fi**.
4. Try to reconnect to Wi-Fi, cellular data, and Bluetooth, or try to share your internet connection again.

Reset app preferences

This reset doesn't allow you to choose individual apps; all apps will be reset.

Before resetting all apps, if you're having trouble with one or two apps, reset the apps individually.

If you still experience the following issues, then reset all apps:

- App crashes frequently or won't open
- App doesn't behave as expected
- App uses too much battery or data
- App sends error messages or notifications
- App causes phone to be slow or unresponsive

What gets deleted/removed when you reset

- Selections you made for default apps to use for specific functions or to open specific file types; you'll be asked to choose again.
- Apps you disabled manually to prevent them from showing in the app tray or on the home screen will reappear; you can disable them again.
- Preferences you set for app notifications, like hiding notification content from the lock screen; you can reset these.
- Changes in background data and app permissions.

Reset

To reset all apps:

1. Go to **Settings** > **System** > **Reset options**.
2. Tap **Reset app preferences**.
3. Tap **Reset apps**.

Reset baseband settings

This resets your phone's mobile network connections. Use it if:

- Your mobile signal is weak
- Calls frequently drop
- Your phone has difficulty connecting to mobile data

What gets deleted/removed when you reset

- Mobile access point name (APN)
- Selected mobile network mode
- Other network-specific settings

Reset

1. Go to **Settings** > **System** > **Reset options**.
2. Tap **Reset baseband settings**.
3. Tap **Reset and restart**.

Reset phone

What a reset does

Resetting your phone erases all data and brings it back to out-of-the-box condition. This data will be erased from the phone:

- Google account
- Media (music, photos, videos)
- System settings and data
- App settings and data (including text messages)
- Downloaded apps

Before you reset

1. Back up your data.

   If your phone works and you can unlock it:

   - If you aren't automatically saving your photos and videos to your Google Photos library, back them up now or copy them to a computer.
   - Back up files and folders to Drive.
   - Make sure that any changes you made to contacts or calendar are synced to an account.

2. Make sure you have your security information:

   - The username for a Google account on your phone. (**Settings** > **Passwords & accounts**)
   - The password for that Google account. If you've forgotten the password, you can reset it. Wait 24 hours before resetting the phone if you reset your password.
   - If you set a screen lock, make sure you know the PIN, pattern, or password.

   To restore your data after resetting, you'll need to enter security information. This shows that you or someone you trust did the reset and helps prevent others from using your phone without permission.

3. If you’re going to give your phone to someone else, disable Factory Reset Protection (FRP):

   a. Remove the screen lock.

   b. Remove your Google accounts from the phone.

   FRP is security measure that keeps your data safe if your phone is lost or stolen, and that requires logging into the phone with the owner's account to reset the phone. Removing your account and screen lock before the reset lets the person you're giving it to set it up with their own information.

Reset phone from Settings

To erase all data and reset your phone:

1. Go to **Settings** > **System**.
2. Tap **Reset options** > **Erase all data (factory reset)**.

Reset phone if you can't open Settings

If you can’t open Settings, do an external reset.

1. Charge your battery 30% or more.
2. Turn off the phone. Do not use **Restart**.
3. Press & hold the Volume Down button and the Power button at the same time until the phone turns on.
4. Press the Volume Down button until you see Recovery mode.
5. Press the Power button to restart in Recovery mode.
6. If you see an Android robot with an exclamation mark, press & hold the Power button and, while holding it down, press & release the Volume up button.
7. Use the Volume buttons to scroll to **Wipe data/factory reset**, then press the Power button to select it.
8. Use Volume buttons to scroll to **Factory data reset**, then press the Power button to select it.

   Allow several seconds for the reset to complete.
9. Use Volume buttons to scroll to **Reboot system now**, then press the Power button to select it.

   Allow several minutes for the reboot to complete. If the phone doesn't finish rebooting, press & hold the Power button until the screen turns dark, then release it to power up normally.
10. If you reset your phone because you suspect a third-party app is causing problems, when you set up the phone again, be sure you don't copy all apps. Restore one app at a time and use the phone for a while. If the phone has no issues, install the next app and retest.

Get more help

Issue	Where to get help
Billing or cellular network issues	Contact your carrier.
Learn to use an app	Open the app and touch ⋮ or ☰ > **Help**.
Phone issue	Visit mobilesupport.lenovo.com for solutions, user forums, live contact options.

Send feedback to Motorola

If you have comments or suggestions about your phone, we want to hear them. Go to **Settings** > **Rating & feedback**.

To send feedback frequently, including a screenshot of the previous screen, open quick settings and touch Share feedback. (You can add this to quick settings.)

To send feedback about a Motorola app, in the app, touch ☰ or ⋮ or ⚙ > **Feedback**.