What's the difference between SLEEP and HIBERNATE in computers?

Click below for all you'll ever want to know about SLEEP and HIBERNATE in computers.
http://windows.microsoft.com/en-us/windows7/Sleep-and-hibernation-frequently-asked-questions

Sleep and hibernation: frequently asked questions

Here are answers to some common questions about sleep and hibernation.

What's the difference between sleep, hibernate, and hybrid sleep?

Sleep is a power-saving state that allows a computer to quickly resume full-power operation (typically within several seconds) when you want to start working again. Putting your computer into the sleep state is like pausing a DVD player—the computer immediately stops what it's doing and is ready to start again when you want to resume working.

Hibernation is a power-saving state designed primarily for laptops. While sleep puts your work and settings in memory and draws a small amount of power, hibernation puts your open documents and programs on your hard disk, and then turns off your computer. Of all the power-saving states in Windows, hibernation uses the least amount of power. On a laptop, use hibernation when you know that you won't use your laptop for an extended period and won't have an opportunity to charge the battery during that time.

Hybrid sleep is designed primarily for desktop computers. Hybrid sleep is a combination of sleep and hibernate—it puts any open documents and programs in memory and on your hard disk, and then puts your computer into a low-power state so that you can quickly resume your work. That way, if a power failure occurs, Windows can restore your work from your hard disk. When hybrid sleep is turned on, putting your computer into sleep automatically puts your computer into hybrid sleep. Hybrid sleep is typically turned on by default on desktop computers.

Why can't I find the sleep or hibernate options on my computer?

Click the Start button , and then click the arrow next to the Shut down button.

If sleep or hibernate aren't available, it might be for one or more of the following reasons:

- Your video card might not support sleep. Update the driver for your video card, or check the information that came with your computer about your video card and supported drivers. For more information, see Update drivers: recommended links.
- Some settings are managed by your system administrator. For more information, see Why won't Windows allow me to change a system setting?
- Sleep and other power-saving states are turned off in your computer's basic input/output system (BIOS). To turn on sleep, restart your computer, and then enter the BIOS setup. As your computer starts, instructions typically appear on the screen that indicate which key or keyboard shortcut you must press to enter the BIOS setup process. Because not all computer manufacturers use the same BIOS, different keys are assigned for this purpose. To learn more, check the information that came with your computer or go to the manufacturer's website.
- If the hibernate option is missing, you might have hybrid sleep turned on.

How can I prevent my computer from automatically sleeping or hibernating?

You can adjust how long your computer waits before sleeping or hibernating—or prevent it from turning itself off altogether. But be careful. On a battery powered laptop, inhibiting sleep or hibernation can result in data loss if the battery dies. Here's how to prevent your computer from entering a power-saving state:

1. Open Power Options by clicking the Start button , clicking Control Panel, clicking System and Security, and then clicking Power Options.
2. On the Select a power plan page, click Change plan settings next to the selected plan.
3. On the Change settings for the plan page, click Change advanced power settings.
4. On the Advanced settings tab, double-click Sleep, double-click Sleep after, and then do one of the following:
   o If you're using a laptop, click On battery or Plugged in (or both), click the arrow, and then click Never.
   o If you're using a desktop computer, click Setting, click the arrow, and then click Never.
5. Double-click Hibernate after, and then do one of the following:
   o If you're using a laptop, click On battery or Plugged in (or both), click the arrow, and then click Never.
   o If you're using a desktop computer, click Setting, click the arrow, and then click Never.
6. If you also want the display to stay turned on, double-click Display, double-click Turn off display after, and then do one of the following:
   o If you're using a laptop, click On battery or Plugged in (or both), click the arrow, and then click Never.
   o If you're using a desktop computer, click Setting, click the arrow, and then click Never.

7. Click OK, and then click Save changes.

How can I wake my computer from sleep or hibernation?

On most computers, you can resume working by pressing your computer's power button. However, not all computers are the same. You might be able to wake your computer by pressing any key on the keyboard, clicking a mouse button, or opening the lid on a laptop. Check the documentation that came with your computer or go to the manufacturer's website.

You can also wake some computers by turning them on remotely over a network. This is called Remote Wake-up or Wake on LAN. For more information, see What are "Wake on LAN" capabilities?

Why does my computer not go into sleep or hibernation as expected, or why does it wake unexpectedly?

- A hardware device might be keeping your computer awake. USB flash drives and USB mice are common devices that can keep your computer awake. Make sure that you have the most current drivers all of your devices. For more information, see Update drivers: recommended links.

    ### To prevent a device from waking your computer

    1. Open Device Manager by clicking the Start button , clicking Control Panel, clicking System and Security, and then, under System, clicking Device Manager. If you're prompted for an administrator password or confirmation, type the password or provide confirmation.
    2. In the list of hardware categories, find the device that you want to prevent from waking your computer, and then double-click the device name.
    3. Click the Power Management tab and then clear the Allow this device to wake the computer check box.
    4. Click OK.
- A program or scheduled task might be waking your computer. By default, Power Option settings do not allow scheduled tasks to wake the computer from sleep or hibernate. However, some programs might awaken the computer if these settings have been changed.

    ### To prevent programs from waking your computer

    1. Open Power Options by clicking the Start button , clicking Control Panel, clicking System and Security, and then clicking Power Options.
    2. On the Select a power plan page, click Change plan settings for the plan that you want to change.
    3. On the Change settings for the plan page, click Change advanced power settings.

4. On the Advanced settings tab, expand Sleep, expand Allow wake timers, choose Disable for both when your computer is running on battery and when it's plugged in, and then click OK.

I have a device that doesn't function properly after waking up from sleep or hibernate.

If you can, disconnect and reconnect the device or try restarting your computer. You can also make sure that you have the most current drivers for all of your devices. For more information, see Update drivers: recommended links.

Will sleep eventually drain my laptop battery?

Sleep requires an extremely small amount of power. If your laptop battery charge gets critically low while the computer is asleep, Windows automatically puts the laptop into hibernation mode.

Is my data safe while my computer is asleep?

You can prevent unauthorized access by requiring a password to unlock your computer when it wakes from sleep. For more information, see How do I change the password requirement when my computer wakes from sleep?

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