



Why Is It So Hard to Adjust When Clocks “Fall Back”?

A UCSF professor in neurodegenerative diseases explains circadian rhythms, internal clocks and our personal chronotypes.

November 3, 2025 By University of California San Francisco and Robin Marks

Daylight saving time ended this Sunday, November 2, at 2:00 a.m. It was introduced in 1918 as a way to conserve energy by making the most of summer’s daylight hours. But some people say that shifting our clocks is its own form of energy drain.

That’s because many feel disoriented for days, or even weeks, after we “spring forward” or “fall back” by an hour. We asked neurologist [Louis Ptacek](#), MD, of the University of California, San Francisco’s Weill Institute for Neurosciences and who studies circadian rhythms, why this disruption to our internal clocks throws us for a loop and what we can do to make the adjustment easier.

What is a circadian clock and why is it important?

A circadian clock, or circadian rhythm, is the 24-hour cycle of waking and sleeping in response to daylight and darkness.

When you’re sleeping and the sun comes up, your eyes sense the light even when they’re closed. That light sends a signal to the master clock in your brain saying, “Hey, the day is starting, time to get up.” Your body prepares by raising your body temperature and blood pressure and nudging your digestive tract and immune system to become more active.

As nighttime comes on, the body winds it all back down.

How does changing our clocks by an hour impact our internal clock?

Like an alarm clock, your circadian clock tells you it’s time to get up. When we “fall back” the day begins an hour earlier than the clock is anticipating, which make you feel like things aren’t the way they’re supposed to be. Similarly, toward the end of the day, you’re ready for bed at an early hour.

All of this affects our physiology. When we're thrown off like this, we're more prone to making errors. Research shows that the number of car accidents usually goes up a bit when we change our clocks, people make mistakes at work — all because we're out of sync with the environment.

Are some affected more than others? If not, what makes the difference?

There are differences from person to person. It relates to what we call “chronotype,” the body's natural preference for what time to wake up and to go to sleep. Some of us are morning larks, others are night owls, and some are in between. Night owls will typically do better than others when we set our clocks back. Morning larks will do better springing forward.

Why can changing clocks affect people's mood so much?

We know that our exposure to light has a strong connection with both our mood and our biological clock, but we don't understand much about how mood and the biological clock are connected. It seems that our mood is affected by how well we're aligned the solar day. Disrupting that alignment in people who are sleep-deprived or prone to depression can increase their risk of becoming depressed.

Understanding how that happens could benefit people who are not aligned with the solar day, like people who work night shift or people who frequently travel across time zones. It's a question my lab is hoping to study in the future. We've identified a gene that's at a nexus where mood and circadian rhythms are regulated, but there's much more to learn about this connection.

How can people mitigate the impact of daylight saving?

Changing our clocks presents us with an opportunity to align ourselves better with the natural day and night.

- Ease into the change a few days beforehand. Get enough rest so that you're not sleep deprived or living out of sync with your circadian rhythm.
- Change your sleep schedule by 15-30 minutes to counter the time change – 15 mins later for falling back, 15 mins earlier for springing forward.
- Shift your mealtimes the same way and remember that it's healthier to eat during the day than late at night.

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