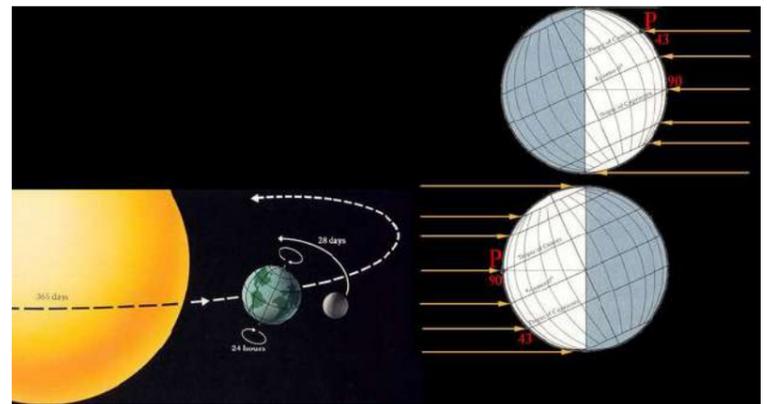


Too Many Reasons Why Daylight Saving Time Is Bad for You

The shift disrupts circadian rhythm and may raise the risk of strokes.

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Every cell in your body has an internal circadian clock. These clocks regulate everything from body temperature and hormone levels to blood pressure, baseline metabolism, and alertness. All of them beat to the rhythm of a master timekeeper (*zeitgeber*) located in the midbrainstem. Our bodily timekeeper synchronizes itself each day to the natural cycles of sunrise and sunset. Why? Because life evolved on a rotating planet that has a light–dark cycle of 24 hours.



Solar Drumbeat. Life evolved on a rotating planet. Source: Author

Circadian = "About a Day"

Politicians who meddle with this natural cycle inflict unintended health problems by forcing us to go against our natural circadian rhythm. The word “circadian” comes from the Latin *circa dies*, meaning “approximately one day.” Isolated volunteers kept in constant illumination fall into a natural rest–wake period of 25.5 hours, which is the brain’s inherent rhythm. Sunlight exposure resets the brain’s circadian clock every day to the familiar 24–hour cycle of sleep and wakeful activity.

Jet lag happens because circadian rhythms adapt sluggishly to time zone changes. When you travel across time zones, the body’s circadian clock adjusts in a day or two to the new cycle of local light-and-dark. But in the case of daylight saving time (DST), clock time changes while the dark-light cycle doesn’t. The result is a discrepancy between your biological clock and the social clock, with a number of untoward consequences.

Standard Time More in Sync with the Sun

Standard time comports closely to the sun’s natural time, whereas DST essentially puts us in another time zone without changing the day-night cycle. The misalignment asks the circadian clock to change our physiological rhythms and do things at times that are not biologically in step. As a result, many people suffer when we change the clock backward or forwards.

Writing in *JAMA Neurology*, Professor Ann Malow at Vanderbilt University calls switching between standard and daylight saving time “bad for the brain. Going back and forth is disruptive and makes no sense.” Switching time isn’t like flying from Washington DC to Los Angeles. “It’s more like a permanent thing where for the next eight months you’re an hour off and suffer for it” [1].

The American Academy of Sleep Medicine found that 55 percent of American adults feel drained and inefficient during the week or more after switching to DST. Their advisory raises concern because your body knows what time it’s supposed to be, and when governments change it your health can suffer ([download the pdf here](#)).

Suicide, Mishaps, and More ER visits

The Academy is issuing a 2020 position paper. Half-a-dozen studies have found a 5% to 15% increased risk of having a heart attack during the days after shifting to DST, and a 24% increase alone on the day after the switch. “It’s a preventable cause of cardiac injury,” the Academy says. “Perhaps the risk stays elevated throughout the months we stay on daylight saving time.”

Traffic accidents and emergency-room visits rise after the time switch, as does the incidence of depression and suicide. A 2020 study in the journal *Sleep Medicine* revealed an increase in hospital admissions for atrial fibrillation following the transition to DST but not after the Spring–forward change. “People really need to pay attention to healthy sleep habits especially around this period of time,” says author Andrew Krumerman, Professor of Medicine at Albert Einstein College of Medicine.

The Dark Arctic Circle

You may wonder how people living in the arctic circle reset their circadian clocks when the local seasonal cycles of light and dark are at odds with the basic rhythm of human biology. Contrary to common belief, the arctic is not in constant darkness for half the year and constant sun during the other half. The Inuit settlement of Mittimatalik (73° N) is about as far north as all but a few people live routinely. Its winter period, when the sun is always below the horizon, lasts only 70 days.

But even then there are a few hours of twilight each day to break the monotony of darkness. Murmansk and Tromsø each have even less time without some daily sun while Shetland, at 6° below the Arctic Circle, is never without a bit of noon sun even in mid-winter. So inhabitants south of 73° N have some sunlight or at least bright twilight each day in the winter [2].

The question then is how much light per day does it take to maintain circadian rhythms? Not much: Even only a few minutes of moonlight will do, and it is impressive that people adapt so well to living there [3]. A few minutes of a bright twilight can also suffice, and during the darkest few weeks around mid-winter people can maintain their rhythm without an external *zeitgeber*. The Inuit maintain a work/sleep cycle without a corresponding light/dark cycle to guide them [4].

A strongly held belief of Shetlanders is that moonlight should never fall on the face of a sleeping person. Being unused to unexpected periods of light during the long winter nights, they may have come to notice the unsettling effect such light had when it shined at sensitive times during the circadian cycle.

Tips to survive Daylight Saving Time:

- Moving into or out of DST has adverse effects on sleep, wakefulness, mood, and optimal health for 5 to 7 days. Cardiac and stroke risks may last longer.
- These effects are most noticeable in individuals who enter the change with insufficient sleep to begin with.
- The American Academy of Sleep Medicine advises getting at least 7 hours per night for 2–3 days before and after the switch–over (see aasm.org & sleepeducation.org).
- **Go outside early on Sunday and expose yourself to morning sunlight to help your jangled internal clock.**

References

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About the Author



Richard E. Cytowic, MD, MFA, professor of neurology at George Washington University, is known for returning synesthesia to mainstream science. *Wednesday Is Indigo Blue*, with David Eagleman, won the Montaigne Medal.

In Print: *Synesthesia (MIT Press Essential Knowledge series)*

Online: Website—Cytowic.net, [Twitter](#), [Facebook](#), [LinkedIn](#)