

Study Finds

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Biological Clockwork: Daylight Saving Time Has Long-Term Impact On The Brain, Study Warns

by John Anderer

NASHVILLE, Tenn. — Daylight saving time is typically considered nothing more than an annoyance or simple fact of life as we “spring forward” and “fall back” each year. But, are these bi-annual adjustments to our internal clocks actually having a larger effect on our bodies than we realize? According to a new research piece conducted at the Vanderbilt University Medical Center in Nashville, Tennessee, the answer to that question is yes.

Over the course of our lives, daylight saving time greatly reduces the amount of bright morning light we experience. While this may sound trivial, morning light is essential for the synchronization of our biological clocks, and not getting enough is associated with increased risk of heart attack and ischemic stroke. In fact, researchers say these disruptions can literally change the structure of the core genes within our circadian clocks. Additionally, lack of bright morning light has been linked to partial sleep deprivation.

During each and every daylight saving time switch, the average adult’s sleep duration shrinks by about 15-20 minutes. The study’s authors say this also increases the likelihood of any number of fatal accidents.

“People think the one-hour transition is no big deal, that they can get over this in a day, but what they don’t realize is their biological clock is out of sync,” says Dr. Beth Ann Malow, professor of Neurology and Pediatrics in the Sleep Disorders Division at Vanderbilt University Medical Center, in a release.

“It’s not one hour twice a year. It’s a misalignment of our biologic clocks for eight months of the year. When we talk about DST and the relationship to light, we are talking about profound impacts on the biological clock, which is a structure rooted in the brain. It impacts brain functions such as energy levels and alertness,” she adds.

The research team say they decided to publish their findings, a comprehensive overview of previous research performed on the subject, in an effort to encourage the abolishment of the practice altogether.

While some people have more flexible internal clocks and are able to adjust quickly, others aren’t so lucky. For example, Dr. Malow says that certain children with autism can struggle to adjust to daylight saving time for weeks and even months.

Most sleep and circadian rhythm experts agree that daylight saving time isn’t doing anyone any favors. However, researchers admit that it will be difficult to gain political support for an end to daylight saving time, citing state legislation that is “all over the map.”

The review is published in the scientific journal *JAMA Neurology*.