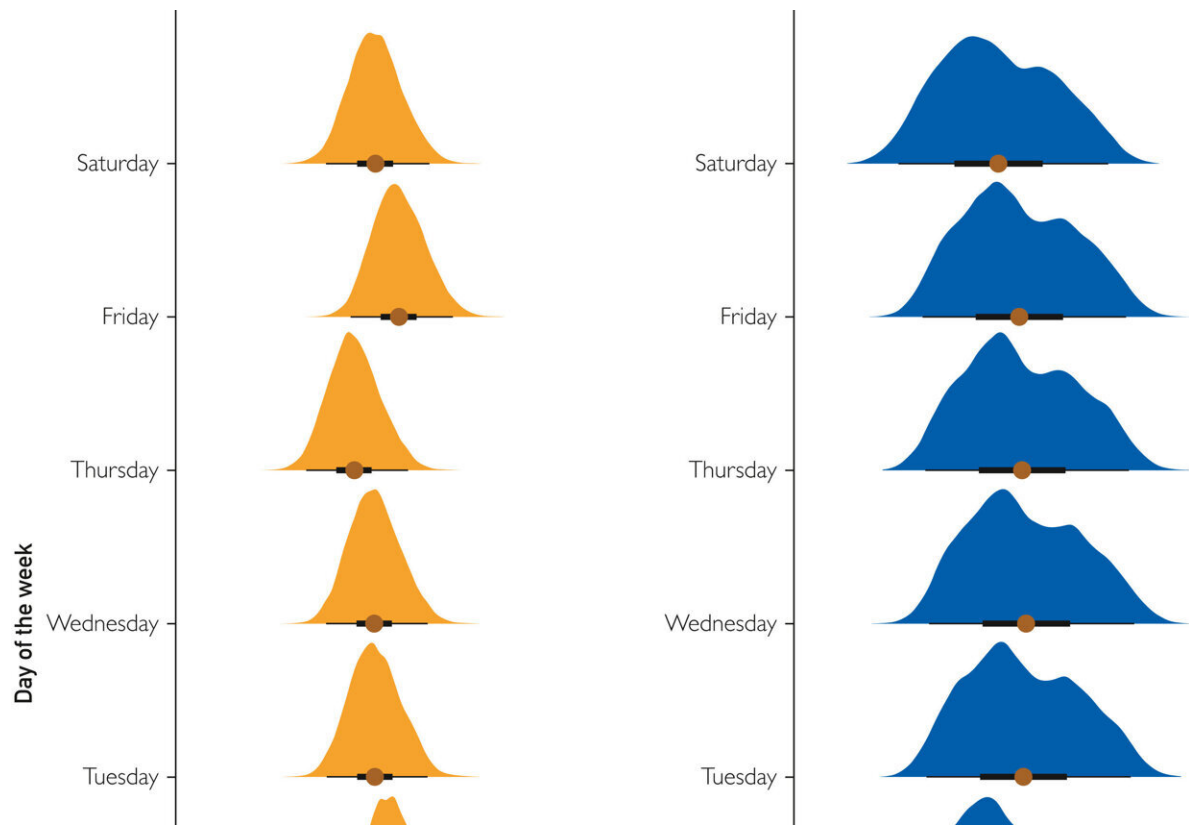


Study shows daylight saving time has minimal effect on heart health

February 27 2024, by Vincent Jacobbi



Orange and blue density plots denote full posterior distributions of event rate ratios for adverse cardiovascular events during daylight saving time transitions in (A) spring and (B) autumn, respectively, where day level results were obtained by marginalizing out week and year level effects from the joint posterior distribution. Black dots represent posterior mean event rate ratios, whereas thick and thin black horizontal lines denote 50% and 95% uncertainty intervals, respectively. Credit: *Mayo Clinic Proceedings: Innovations, Quality & Outcomes* (2024). DOI: 10.1016/j.mayocpiqo.2023.12.006

A recent Mayo Clinic study examining the effects of daylight saving time (DST) on heart health suggests that the impact is likely minimal.

In the nationwide study, researchers applied an advanced statistical model to look for any connections between DST and serious cardiovascular problems, including heart attacks and strokes. The study looked at 36,116,951 adults aged 18 and up across most U.S. states. (Arizona and Hawaii were excluded since these states do not observe DST.)

Researchers focused on the week directly after the spring and fall DST transition, when clocks are set either an hour forward or backward.

"We looked at five years across the U.S., and what we found is that it's unlikely that there is a clinically meaningful difference in cardiovascular health due to daylight saving time," says Benjamin Satterfield, M.D., Ph.D., a cardiovascular diseases fellow and lead author of the study.

Researchers found 74,722 [adverse cardiovascular events](#) occurred throughout the study during the spring and fall DST transition. An adverse cardiovascular event was documented when a person was hospitalized with a primary diagnosis of a [heart attack](#), stroke, cardiogenic shock, or cardiac arrest.

"These cardiovascular events are common health conditions, so this led to the question of whether this is more than would be expected if this had not followed the daylight saving time transition," says Dr. Satterfield.

The observance of daylight saving time varies around the world. Countries that move clocks forward or back one hour may do so on

different dates, and some do not observe daylight saving time at all.

In the Mayo Clinic study, the Monday and Friday following the spring DST transition showed a statistically slight increase in the rates of cardiovascular events—but when looking at all the data, researchers did not see the rise as clinically significant, he said.

Researchers note that the time change practice was intended to align social and work activities with daylight hours and to conserve energy using less artificial lighting. They underscore that making changes to the DST system out of concern for heart health is unnecessary.

"When decisions are made about whether to abolish daylight saving time, there is no need to take concerns regarding heart health into account," says Bernard J. Gersh, M.B., Ch.B., D.Phil., cardiologist and senior author of the study.

Dr. Gersh and Dr. Satterfield note that the debate over DST includes other aspects of health. For example, Dr. Satterfield said researchers are exploring DST's effect on [mental health](#) and its effect on the rates of motor vehicle accidents.

The study is [published](#) in the journal *Mayo Clinic Proceedings: Innovations, Quality & Outcomes*.

More information: Benjamin A. Satterfield et al, Daylight Saving Time Practice and the Rate of Adverse Cardiovascular Events in the United States: A Probabilistic Assessment in a Large Nationwide Study, *Mayo Clinic Proceedings: Innovations, Quality & Outcomes* (2024). [DOI: 10.1016/j.mayocpiqo.2023.12.006](https://doi.org/10.1016/j.mayocpiqo.2023.12.006)

Provided by Mayo Clinic

Citation: Study shows daylight saving time has minimal effect on heart health (2024, February 27) retrieved 27 April 2024 from <https://medicalxpress.com/news/2024-02-daylight-minimal-effect-heart-health.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.