

Dramatic reduction in serious road accidents linked to Daylight Saving Time transition

June 15 2023



Credit: Unsplash/CC0 Public Domain

Fewer serious road accidents occur when we enter Daylight Saving Time (DST), according to new research from the University of Surrey, which analyzed a decade's worth of data.

The research found a dramatic 15%–20% reduction in serious road accidents during the days close to the Spring DST transition. This reduction is driven by fewer accidents occurring between 6 pm and 9 pm because drivers had an hour more of sunlight. The study is published in the journal *Health Economics*.

Analogously, the team also found that leaving DST in the autumn increases minor road accidents by 13%. This is mainly due to more minor accidents happening during the evening hours between 3 pm and 6 pm when an hour of sunlight is reallocated back to the morning. These findings support the hypothesis that drivers are more sensitive to road lighting conditions rather than to the possible sleep deprivation brought about by the artificial DST clock changes.

Dr. Giuseppe Moscelli, Associate Professor in Economics and co-author of the study from the University of Surrey, said, "Our analysis suggests that changes in [road accidents](#) are not influenced by factors such as [fuel prices](#) or road usage but by lighting conditions. It begs the question of whether improving artificial lighting conditions in accident hotspots could improve outcomes for drivers."

The research draws on data from road accident reports in Greece, between 2006 and 2016. The reports are often completed by [police officers](#) inspecting crashes and include information on the date, time, location, accident type, and severity (fatal, serious, or minor).

The study also conducted an economic analysis of the financial cost of these accidents during seasonal clock changes using insurance claims data from the Hellenic Association of Insurance Companies.

Dr. Giuseppe Moscelli explained, "Not transitioning back to Standard Time in the Autumn and keeping that extra hour of sunlight appears to not only be a lifesaver, but cost-effective for the taxpayer. Abolishing

DST could lead to cost savings of approximately €7.5 million per year during the Spring transition because of the decrease in serious accidents during the additional evening daylight hour provided by DST."

More information: Ioannis Laliotis et al, Summertime and the drivin' is easy? Daylight saving time and vehicle accidents, *Health Economics* (2023). [DOI: 10.1002/hec.4715](https://doi.org/10.1002/hec.4715)

Provided by University of Surrey

Citation: Dramatic reduction in serious road accidents linked to Daylight Saving Time transition (2023, June 15) retrieved 29 April 2024 from <https://medicalxpress.com/news/2023-06-reduction-road-accidents-linked-daylight.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.