

This is the submitted (and accepted) version of the manuscript published on January 19, 2024 by the journal of Clinical Sleep Medicine, which is available under DOI: [10.5664/jcsm.11042](https://doi.org/10.5664/jcsm.11042)

Daylight-saving time is a solution for which many forgot the problems

José María Martín-Olalla (Ph D) (olalla@us.es)

Departamento de Física de la Materia Condensada, Facultad de Física, Universidad de Sevilla, Sevilla, Spain

Jorge Mira (Ph D)

Departamento de Física Aplicada and iMATUS, Universidade de Santiago de Compostela, Santiago de Compostela, Spain

All authors have seen and approved the manuscript.

This work was not financed.

All authors declare no competing interests.

Word count (including references): 499

“Tradition is a set of solutions for which we have forgotten the problems. Throw away the solution and you get the problem back. Sometimes the problem has mutated or disappeared. Often it is still there as strong as it ever was.” (Donald Kingsbury; *Courtship rite*, 1982). In *Permanent standard time is the optimal choice for health and safety: an American Academy of Sleep Medicine position statement* JCSM (Jan 2024) Rishi et al¹ yell at daylight-saving time (DST, a tradition that is lasting for one hundred years) and ignore the problem it helped to solve.

The manuscript reads in the Introduction that “(h)uman activities are affected by three clocks”: the circadian clock, the solar clock, and the social clock. “Under ideal conditions, all three clocks would be aligned to allow for optimal health and performance. The human biological clock is regulated by the timing of light and darkness, which then dictates sleep and wake rhythms. In daily life, the timing of exposure to light is generally linked to the social clock.” Surprisingly, the position statement does not ponder the fact that sunrise times, sunset times, photoperiod and scotoperiod seasonally change at the latitude of the contiguous US. In other words, the three clocks are misaligned by nature at 40 degrees latitude. How can activities such as school and work begin aligned with the sunrise if this stimulus changes by three hours in six months at this latitude? They cannot; unless we introduce seasonal variability in social time. DST addressed (and helped to solve) this social and circadian problem.²

Unaware of this, many medical associations and societies have long pushed for canceling DST. But now, they look surprised in seeing that many would rather choose permanent DST over permanent standard time (ST). The authors say in Background that the 1973 attempt to introduce permanent DST in the US was “short-lived due to overwhelming unpopularity”. We certainly endorse this point of view. Short-lived attempts of permanent DST were also observed in the UK, Portugal, and Ireland (1970s); in Russia (2010s); and in Chile (2015). In view of that, how should we assess the known evidence that the biannual changing of the clocks is extremely long-lived in comparison: 100 years in

UK, Ireland, Portugal and in the major cities of the US? Is it not that also evidence of the extreme unpopularity of permanent ST?

A bold conclusion, like “permanent ST is the optimal choice for health and safety” is, requires a fair balance of the cons and pros of the practice. Rishi et al thoroughly addressed the cons and opted to ignore the health and safety pros that the practice has brought in terms of the alignment of the three clocks.

1. Rishi MA, Cheng JY, Strang AR, et al. Permanent standard time is the optimal choice for health and safety: an American Academy of Sleep Medicine position statement. *Journal of Clinical Sleep Medicine*. 2024;20(1):121-125. doi:10.5664/JCSM.10898
2. Martín-Olalla JM, Mira J. It is time to understand daylight saving time. *Sleep*. 2023;46(3):zsac309-2. doi:10.1093/SLEEP/ZSAC309