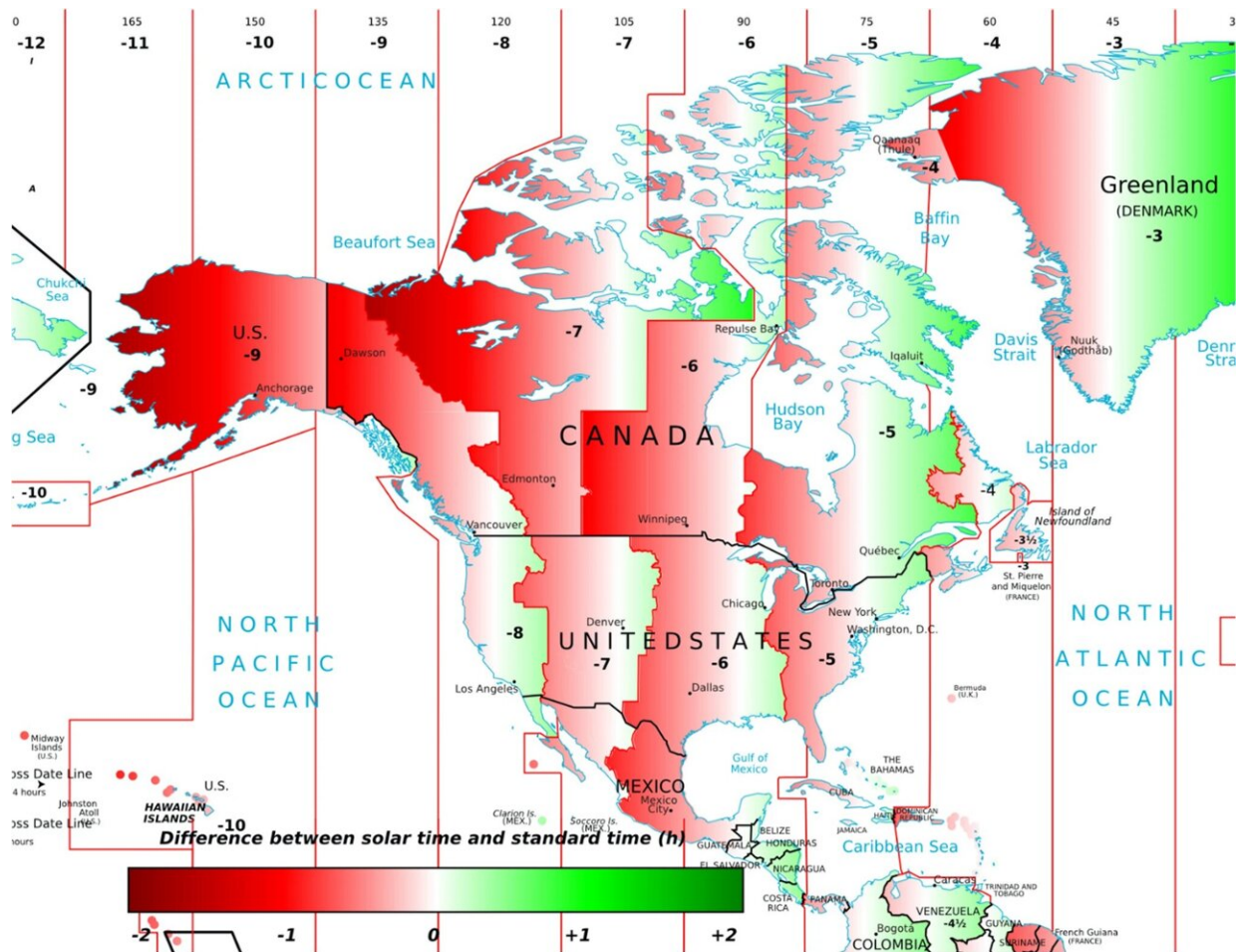


Q&A: Should we go back to year-round standard time?

March 7 2024, by Bernard Rizk



Times zones plus solar time in North America. Regions in red are outside of their solar time zone as a function of color saturation. This figure is extracted from the world map produced by Stefano Maggiolo who has released his work to the public domain. Since the map's drafting in 2015, some Northern regions of Canada have changed their time practice. For example, Yukon and parts of

Nunavut are now under permanent ST which improved their time situation.
Credit: *Canadian Journal of Public Health* (2024). DOI:
10.17269/s41997-024-00870-0

This spring, the time change will take place overnight, March 9-10, 2024, specifically on Sunday, March 10, 2024, at 2 a.m. The clocks will advance by 1 hour to switch to Eastern Daylight Time (summertime).

We interviewed Joseph De Koninck, Emeritus Professor in Psychology at the Faculty of Social Sciences, to understand why he recommends returning to standard time all year round.

What are the main scientific reasons supporting a return to standard time all year?

It is important to understand that Canada's very northern location makes the practice of changing the clock more problematic. The extreme temperature variation between summer and winter is accompanied by a variation in sunlight, which goes from 16 hours a day in June to 8 hours a day in December. The combination of these two phenomena presents adaptation challenges that are more significant than those faced by our neighbors to the south.

In this context, the main scientific reasons supporting the return to standard time all year round are as follows:

- **Impact on health and well-being:** Both the spring and fall time changes have negative effects because they force a rapid desynchronization of the biological clock that governs our [sleep](#) and daytime functioning. However, it is the transition to daylight saving time in the spring that causes the most problems because it

involves a potential loss of an hour of sleep with well-known effects on mood, concentration, and memory, an increase in road accidents, and cardiovascular problems. Some disruptions in [biological rhythms](#) persist throughout the summer and into the fall until the return to standard time in the autumn. While this last-time change brings sunrise earlier in the morning and offers the possibility of adding an hour of sleep, the earlier onset of darkness in the afternoon has a depressive effect that can notably accelerate seasonal depression.

- Biological rhythm and [light exposure](#): Humans are diurnal animals who need to be exposed to daylight to function normally. Standard time is based on solar time, which allows for better harmonization of our biological clock with natural light exposure, thus promoting better quality sleep and optimal physical and mental performance. In contrast, daylight saving time tends to induce [social jet lag](#), delaying bedtime. If one must wake up at the same time in the morning, there is a loss of sleep that some research estimates to be an average of 30 minutes, with negative effects on daytime functioning.
- Psychological consequences: Exposure to sunlight or artificial light, especially in the morning, is recommended for treating seasonal depression and major depression. Maintaining standard time all year round could contribute to improving [mental health](#) and psychological well-being because changes in the amount of sunlight between summer and winter are gradual (a few minutes per day) and more easily manageable for our biological clock.

How can shifting the period of sunlight exposure towards the evening affect the synchronization of our biological clock?

Shifting the period of sunlight exposure towards the evening can

desynchronize our biological clock in various ways. This can disrupt our sleep, alertness, and hormone production cycles. Additionally, it can decrease the quantity and quality of sleep. The [circadian system](#) requires adequate exposure to daylight, especially in the morning and midday, with reduced exposure in the evening to synchronize properly. Too much light in the evening inhibits the production of melatonin, which is important for facilitating sleep.

In short, shifting the period of sunlight exposure towards the evening can disrupt the synchronization of our biological clock and affect our sleep, alertness, and physiological functions.

How do you envision the transition to permanent standard time in Canada, and what could be the potential challenges associated with this change?

The transition to permanent standard time in Canada could have several advantages, including stability in the circadian rhythm, better synchronization with natural light, and reduction of sleep disturbances caused by the time change. Generally, it can be said that children who need more sleep are more advantaged by permanent standard time.

Maintaining standard time during the summer may not be favored by some since it will get dark earlier during the summer. This will affect social habits, outdoor evening activities, and associated businesses. Studies show these effects are offset by other favorable evening activities, such as outdoor cinemas or drive-ins, campfires, and stargazing. With daylight saving time in June, children have to stay up very late if they want to pursue astronomy.

The associated study is [published](#) in the *Canadian Journal of Public Health*.

More information: Joseph De Koninck et al, The practice of Daylight Saving Time in Canada: Its suitability with respect to sleep and circadian rhythms, *Canadian Journal of Public Health* (2024). [DOI: 10.17269/s41997-024-00870-0](https://doi.org/10.17269/s41997-024-00870-0)

Provided by University of Ottawa

Citation: Q&A: Should we go back to year-round standard time? (2024, March 7) retrieved 28 April 2024 from <https://medicalxpress.com/news/2024-03-qa-year-standard.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.