

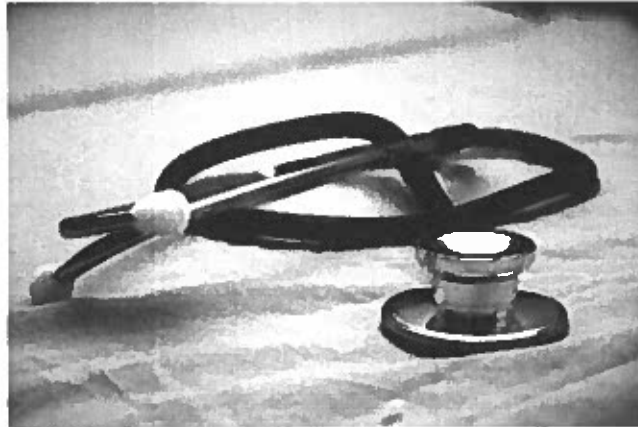
#LockTheClock - Stop Changing Clocks for Daylight Saving Time

(<https://www.sco.tt/time/>)

The official site of the movement to quit changing clocks in and out of DST.

Research

What is the science behind #LockTheClock?



(<https://unsplash.com/photos/y001Z-9HQAw>)

Health - Overall

- Risks from a wide range of health problems (including renal failure, wrist injuries and many others) climb in the days after the “spring forward” time change.
Public Library of Science Journal of Computational Biology (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7302868/>)
- The “spring forward” change means more overall deaths from heart attacks, traffic accidents, suicides and other causes.
Intl. Journal of Environmental Research and Public Health
(https://www.researchgate.net/publication/339672229_Daylight_Saving_Time_Transitions_Impact_on_Total_Mortality)
and Intl. Journal of Legal Medicine
(https://www.researchgate.net/publication/328684334_The_controversial_debate_about_daylight_saving_time_DST-results_of_a_retrospective_forensic_autopsy_study_in_FrankfurtMain_Germany_over_10_years_2006-2015) and a review of studies by the Wake Forest Law Review (http://wakeforestlawreview.com/wp-content/uploads/2014/10/Calandrillo_LawReview_1.08.pdf).
- The human circadian system does not adjust into DST.
Current Biology (<https://www.sciencedirect.com/science/article/pii/S0960982207020866>)
- Medical errors go up after the spring change.
Journal of General Internal Medicine (<https://link.springer.com/article/10.1007/s11606-020-06090-9>)

Health - Specific Conditions

- Heart attacks go up because of the clock change.
New England Journal of Medicine (<http://www.nejm.org/doi/full/10.1056/NEJMco807104>), Sleep Medicine Journal
(<http://www.sleep-journal.com/article/S1389-9457%2811%2900383-2/abstract>), European Journal of Public Health

https://academic.oup.com/eurpub/article-abstract/29/Supplement_4/ckz187.082/5623250?redirectedFrom=PDF), European Heart Journal (https://academic.oup.com/eurheartjsupp/article-abstract/21/Supplement_J/J115/5674071).

- Strokes and incidents of Atrial Fibrillation go up because of the clock change. Circulation Journal (<http://circ.ahajournals.org/content/118/3/284.short>), and Sleep Medicine Journal (<https://www.sciencedirect.com/science/article/abs/pii/S1389945720300496>).
- Clock-changing increases IVF miscarriages. Chronobiology International (<http://www.tandfonline.com/doi/full/10.1080/07420528.2017.1279173>).
- Deaths from drug overdoses and suicide would decline with no time change and permanent DST City University of New York (https://www.gc.cuny.edu/CUNY_GC/media/CUNY-Graduate-Center/Images/Programs/Economics/EcoSlider/Saving-Light,-Losing-Lives-How-Daylight-Saving.pdf).
- The “Fall Back” change brings an increase in depression. Journal of Epidemiology (https://journals.lww.com/epidem/Fulltext/2017/05000/Daylight_Savings_Time_Transitions_and_the.7.aspx).
- Permanent Standard Time is better for treating Seasonal Affective Disorder. Archives of General Psychiatry (<https://jamanetwork.com/journals/jamapsychiatry/fullarticle/204323>).
- Year-round Daylight Time means people walk and ride bikes more. Journal of Environmental Psychology (<https://www.sciencedirect.com/science/article/pii/S0272494417300762>).
- Ending clock changing helps sleep, and standard time is better than permanent DST for sleep. Journal of Biological Rhythms (<https://journals.sagepub.com/doi/10.1177/0748730419854197>), Journal of Health Economics (<https://www.sciencedirect.com/science/article/abs/pii/S0167629618309718?via%3Dihub>). (Although, other studies, like this one from Chronobiology International (<https://www.tandfonline.com/doi/full/10.1080/07420528.2019.1684937>), say that better sleep from permanent DST is “relatively small.”)
- The clock change compromises sleep duration and efficiency, and regulation of cortisol. Neuroscience Letters (<https://www.sciencedirect.com/science/article/abs/pii/S0304394006007038>).
- People living in permanent DST would burn more calories. University of Washington (<https://econ.washington.edu/sites/econ/files/old-site-uploads/2014/06/Economica-R-and-R-2014-Wolff-Makino.pdf>).



<https://unsplash.com/photos/GkzGwzSRQM>

Children and Schools

- There is NO increased risk to children in rural areas.
[American Journal of Public Health \(https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1615292/\)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1615292/)
- Again, there is simply no evidence that school children are put at risk by year-round DST.
[Congressional Research Service \(https://fas.org/sgp/crs/misc/R45208.pdf\)](https://fas.org/sgp/crs/misc/R45208.pdf), citing multiple studies.
- Permanent DST helps in the fight against childhood obesity.
[Journal of Behavioral Nutrition and Physical Activity \(http://www.ijbnpa.org/content/11/1/84\)](http://www.ijbnpa.org/content/11/1/84) and [Journal of Physical Activity and Health \(https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3584676/?report=reader\)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3584676/?report=reader)
- The clock changing costs teens sleep.
[American Academy of Sleep Medicine \(https://aasm.org/study-shows-that-teens-lose-sleep-after-change-to-daylight-saving-time/\)](https://aasm.org/study-shows-that-teens-lose-sleep-after-change-to-daylight-saving-time/)



<https://www.sco.tt/a/6a00d8357e4fe369e20240a506dd5200b-pihttps://unsplash.com/photos/VC29UOTYecs>

Traffic

- Staying in DST will improve traffic safety in the winter months, and there is NO increased risk to students waiting for school buses.
[Journal of Safety Research \(https://www.sciencedirect.com/science/article/pii/S002243751000112X\)](https://www.sciencedirect.com/science/article/pii/S002243751000112X) and [Royal Automobile Club Foundation \(https://www.racfoundation.org/wp-content/uploads/DST_Collisions-2012-2017_REPORT_Oct-2018.pdf\)](https://www.racfoundation.org/wp-content/uploads/DST_Collisions-2012-2017_REPORT_Oct-2018.pdf)
- Traffic accidents spike in the week after “Spring Forward.”
[American Economic Association \(https://www.aeaweb.org/articles?id=10.1257/app.20140100\)](https://www.aeaweb.org/articles?id=10.1257/app.20140100), [New England Journal of Medicine \(http://www.nejm.org/doi/full/10.1056/NEJM199604043341416\)](http://www.nejm.org/doi/full/10.1056/NEJM199604043341416), [Sleep Medicine](#)

<https://www.sciencedirect.com/science/article/abs/pii/S0031938419306304>

- Just to be clear, the “Spring Forward” change **kills about 28 people every year** just in traffic accidents, just in the U.S. Current Biology (<https://www.sciencedirect.com/science/article/abs/pii/S0960982219316781>), summary here (https://www.eurekalert.org/pub_releases/2020-01/cp-sld012320.php)
- Permanent DST will save lives of pedestrians, drivers and vehicle occupants. Accident Analysis & Prevention (<https://www.sciencedirect.com/science/article/abs/pii/S0001457503000150>) and Sleep Medicine (<https://www.ncbi.nlm.nih.gov/pubmed/11152980>) and Muenchen University (https://mpira.ub.uni-muenchen.de/101835/1/MPRA_paper_101835.pdf).



<https://unsplash.com/photos/2vb-3t6YCM>

Energy and Environment

- Evidence mixed, but some indication that Permanent DST saves energy. U.S. Department of Energy (http://www1.eere.energy.gov/ba/pba/pdfs/epact_sec_110_edst_report_to_congress_2008.pdf)
- Permanent DST will help decrease air pollution. Journal of the Air & Waste Management Assn (<https://www.ncbi.nlm.nih.gov/pubmed/22788102>) and Steve Spangler Science (<https://www.9news.com/article/tech/science/steve-spangler-science/spangler-how-the-time-change-affects-air-quality/73-249946652>)
- Staying in DST all year can save wildlife. The Royal Society Biology Letters (<http://rsbl.royalsocietypublishing.org/content/12/11/20160632>)
- DST changes make computers use extra energy. The Windows Club (<https://www.thewindowsclub.com/dst-setting-causes-high-cpu-memory-usage>)



<https://unsplash.com/photos/66hO44VXR9k>

Crime and Human Behavior

- Crime goes down in Daylight Saving Time.
[Review of Economics and Statistics \(https://www.mitpressjournals.org/doi/10.1162/REST_a_00547\)](https://www.mitpressjournals.org/doi/10.1162/REST_a_00547)
- Crime goes up in Standard Time, down in DST.
[Inter-American Development Bank \(https://publications.iadb.org/en/crime-time-how-ambient-light-affects-crime\)](https://publications.iadb.org/en/crime-time-how-ambient-light-affects-crime), and
[the Global Labor Organization \(https://www.econstor.eu/bitstream/10419/224147/1/GLO-DP-0663.pdf\)](https://www.econstor.eu/bitstream/10419/224147/1/GLO-DP-0663.pdf)
- DST reduces homicides.
[Universities of Brazil and Italy \(https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2786452\)](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2786452)
- Moral Awareness goes down after the Spring time change.
[Journal of Sleep Research \(https://onlinelibrary.wiley.com/doi/full/10.1111/jsr.12231\)](https://onlinelibrary.wiley.com/doi/full/10.1111/jsr.12231)
- People are less civil online after the Spring time change.
[Stevens Institute of Technology \(https://aisel.aisnet.org/icis2019/crowds_social/crowds_social/32/\)](https://aisel.aisnet.org/icis2019/crowds_social/crowds_social/32/)



<https://unsplash.com/photos/DWnUGvN2xsw>

Business

- Workplace injuries go up.
[Journal of Applied Psychology \(https://www.apa.org/pubs/journals/releases/apl9451317.pdf\)](https://www.apa.org/pubs/journals/releases/apl9451317.pdf)
- Workplace productivity goes down because of the clock changes.
[Journal of Applied Psychology \(http://psycnet.apa.org/journals/apl/97/5/1068/\)](http://psycnet.apa.org/journals/apl/97/5/1068/), [story here](#)

<https://www.sciencedaily.com/releases/2012/03/120307112618.htm>

- Getting rid of clock changing will make the stock market perform better, and reduce over-reactions by investors. Journal of Psychological Reports (<http://journals.sagepub.com/doi/abs/10.2466/13.17.PRO.109.6.863-878>) and Journal of Banking and Finance (<https://www.sciencedirect.com/science/article/pii/S0378426619301190>)
- Switching out of DST hurts retail sales. JP Morgan Chase Institute (<https://www.jpmorganchase.com/institute/research/cities-local-communities/jpmc-institute-daylight-savings-report>)



<https://unsplash.com/photos/ajZibDGpPew>

Miscellanea

- Clock-changing harms relationships. Wall St. Journal, citing several studies (<https://www.wsj.com/articles/daylight-saving-time-is-bad-for-your-relationships-1425915039>), subscription required
- Clock-changing brings harsher sentences from judges. Psychological Science (<https://medicalxpress.com/news/2016-12-daylight-harsher-legal-sentences.html>)
- It's a non-partisan issue, and farmers have traditionally been opposed to DST. Social Science Quarterly (<https://onlinelibrary.wiley.com/doi/full/10.1111/ssqu.12656?af=R>)
- Scientists don't subject lab rats to clock-changing because it is too disruptive. NPR interview with neuroscientist (<https://www.npr.org/sections/13.7/2014/11/03/361110132/why-lab-rats-don-t-observe-daylight-saving-time>)
- People do worse at video games after a clock change, showing that cognitive function overall goes down. George Washington University and U.S. Army Research Lab (<https://psyarxiv.com/37svc/>)
- While year-round Standard Time may be better for sleep, scientists who believe that should not push that point of view dogmatically because they will alienate people from science. Clocks & Sleep (<https://www.mdpi.com/2624-5175/2/1/3/html>)
(In fact, this is a great paper to read if you are thinking about using any of this research to push the point of view that permanent Standard or Daylight time is better. It's very hard to say. The only thing conclusive is that changing the clocks, especially in the spring, is deadly.)

Also, here is the excellent study done in the state of Massachusetts:

The Report of the Special Commission on the Commonwealth's Time Zone.

(<https://www.scribd.com/document/359447935/Time-Zone-Commission-Report-DRAFT>)

If you would like to use all this research, you are of course welcome to, but I would appreciate a link to this site. Thanks.

Time (<https://www.sco.tt/time/>)

