

# Daylight savings is linked to injuries and heart attacks, is it time to scrap it?

26 October 2015, by David A. Ellis



Researchers have noted a spike in workplace injuries and road accidents as we set the clocks forward. Credit: Budimir Jevtic/Shutterstock

It is estimated that more than [1.5 billion people](#) across the world are exposed to changes brought about by Daylight Savings Time (DST).

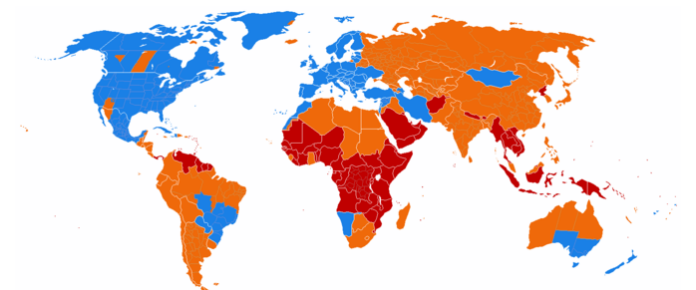
While the clocks on most digital devices update automatically, transitions into and out of DST can be difficult for us humans. And a number of recent studies are providing insights into how a solitary hour can inadvertently affect our health, mood and productivity – often in a negative way.

## Effects on human health

In 2008, researchers examined the influence of these transitions on [the incidence of heart attacks](#) across several years of hospital admissions data. They focused on the two weeks before and after the clocks changed. Worryingly, they found a spike in the number of reported heart attacks after the transition to DST in the spring. In contrast, after moving out of daylight savings time in the autumn this trend was reversed.

These patterns were more pronounced in patients who were of working age (under 65) and the authors argued that the effects may have stemmed from the negative effects of [sleep deprivation](#) on cardiovascular health. They also suggested that vulnerable people should avoid other rapid changes to their sleeping patterns similar to those experienced as part of DST.

Transitions into and out of DST have also been associated with [road traffic accidents](#), [workplace injuries](#), poor mood and reduced efficiency. And many of these effects have been attributed to changes in [sleep duration](#). The [effect](#) is likely to be magnified even further as many people are now regularly sleep deprived – the average sleep duration has fallen from [nine to 7.5 hours during the 20th century](#).



Worldwide daylight savings time. Blue means DST is used, orange that it was formerly used, and red that it has never been used. Credit: Paul Eggert/wikimedia, CC BY-SA

Changes in the duration and quality of sleep as a result of DST are a key focus for current research. My team at the University of Lancaster examined how rates of attendance for medical appointments varied across days of the week and in the weeks before, during and after DST. Non-attendance of appointments not only costs the health service in

England nearly [£1 billion a year](#), but missed appointments are also associated with poorer health outcomes.

[We found](#) that patients were more likely to attend an appointment after the clocks went back, most likely due to the extra hour of sleep. The opposite trend was again observed when the clocks went forward in the spring as more patients missed an appointment. Therefore, beyond asking patients to get more sleep, a simple intervention to reduce non-attendance might involve sending a few additional reminders to patients as spring approaches.

At around the same time, other psychologists were considering the negative effects of DST in the workplace – specifically on so-called cyberloafing – the time people spend using work hours to check personal emails and browse websites unrelated to work. Using Google search data the authors were able to demonstrate that shifting into DST resulted in a [large increase in cyberloafing](#). They also carried out an additional experiment, which illustrated a clear relationship between poor quality of sleep and increased levels of cyberloafing.

### The broader picture

It is important to keep in mind that other contributing factors could also underlie these patterns of behaviour. For example, a person's motivation to work hard may prevent them from cyberloafing even if they have experienced a reduction in the quality of their sleep. Similarly, patients miss appointments for many reasons and a complete explanation of these and other effects will require further study.

On the flip side, exploiting the positive effects when moving out of DST could potentially save money and increase productivity. There may also be health benefits from daylight savings, such as spending more time outdoors and being more active. Getting a detailed picture is difficult. As research questions go, understanding DST remains challenging because changes only occur twice a year. Therefore, scientists have to remain cautious when interpreting their results.

There are also effects outside of [human health](#) that

need to be taken into account. DST is known to give an economic boost to a number of industries like grill and charcoal businesses and sporting-related firms. One study estimated that DST [increases the revenue](#) of the European Union's leisure sector by roughly 3%. Proponents often argue that DST is therefore good for the economy. Unfortunately it isn't that simple. It has also been reported to hit [dairy farmers](#) and the [television industry](#) hard.

While the literature is far from conclusive, the impact of DST could have far-reaching implications for the simple reason that it is almost impossible for anyone to shield themselves when the clocks go forward or back. While our smartphones and tablets adapt to the changes of DST seamlessly, human behaviour continues to require some careful adjustment.

Should we abandon DST and leave our clocks alone? While more evidence suggests that it does appear to have a negative impact on our health, the effects tend to be short-lived. However, that has to be weighted against the beneficial effects on productivity and the economy. Do the benefits of one extra hour in the autumn override the [negative effects](#) of DST in the spring? As always, only more research will answer that question.

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