

Dear Honorable Legislators,

Please vote YES on SB 1548 for the health and safety of Oregonians.

We need healthy sleep all year long to maintain a robust immune system, critical cognitive functions, metabolic health, alertness and a positive mood. However, the week following our annual ‘spring’ forward, heart attacks and car accidents temporarily increase. This balances out with fewer heart attacks the day after we gain an hour of sleep in the fall.

But there are chronic problems with staying on Daylight Saving Time, as [chronobiologists](#) – those who study sleep and our natural body rhythms – have found. Shifting our social clock forward permanently has [far greater implications](#) and lasting impacts on health, including decreased life expectancy, shortened sleep, mental problems, and sleep disturbances. **If Oregon wants to get out of the spring-forward, fall-back trap, it should opt for continuous Standard Time.**

Russia conducted an experiment on its entire population from 2011 to 2014, when the country permanently switched to “summertime” – what we call Daylight Saving Time. In the depths of winter it was anything but! Waking up an hour earlier during the coldest and darkest time of the year, robbed an entire population of the early morning sunlight that scientists say helps the “body clock” align with earth’s “solar clock.” The shift had [negative influences](#) on adolescents’ sleep habits, moods and behavior, with the most pronounced effects on those living in Russia’s northern latitudes. Citing health problems and a rise in early morning car accidents, in October 2014, Russia switched to permanent Standard Time and has been there for almost a decade.

Permanently shifting sunrise later by an hour increased something scientists call “social jetlag,” the miserable effects similar to when you fly across timezones. [Each hour of social jetlag](#) is associated with an 11% increase in the likelihood of heart disease, according to a 2017 research study published in the journal [Sleep](#). These effects are independent of sleep duration. Scientists have [evidence](#) of how even living on the western edge of a time zone affects people differently than those on the eastern edge. People on the western edge are forced to get up an hour earlier than people on the eastern edge, relative to sunrise. Analysis of health data from millions of people shows that people on the western edges get on average 19 minutes less sleep every night than people on the east, and have [significantly higher](#) rates of obesity, diabetes, and heart attacks.

Why is this? Sunset and sunrise are powerful biological triggers. Drops in temperature and evening’s fading light causes a natural release of melatonin, a hormone that induces drowsiness. Sunrise and natural early morning light sends a strong wake up signal to the suprachiasmatic nucleus, the brain region that scientists sometimes call our body’s “master clock.”

When we shift our social clock to Daylight Saving Time, we are more likely to wake up in darkness and are exposed to more evening light. Darker mornings and brighter

evenings push our circadian rhythms later even though work and school times do not change. This mismatch between body and environment influences the associated deleterious health effects.

For example in the Pacific Northwest, permanently delaying sunrise an hour during the winter would lead to months of starting work and school in darkness. In Portland, an 8:00 am work or school start would now be in darkness for [109 days](#) as opposed to zero days out of the year as we have today. Waking up will become more difficult for adults and school kids, likely worsening mental health conditions such as seasonal affective disorder.

Circadian research also tells us that when [high schoolers have later start times](#) aligned with their body clock their mental health, grades and performance measurably improve and there are significantly fewer car accidents due to drowsy driving. The life expectancy of students increases when school times are later. The leading cause of death among teens is traffic accidents, because insufficient sleep has measurable consequences. Teton County in Wyoming shifted from a 7:35 a.m. start to a far more biologically reasonable 8:55 a.m. start. [The result was astonishing](#)—a 70% reduction in traffic accidents in sixteen- to eighteen-year-old drivers. Shifting when we first get morning sun has consequences [for our children](#), but will also affect adults, leaving us all miserable and groggy.

We also can learn from our own history. In 1973, the United States wanted to save energy during the national energy crisis. Congress instituted a plan for almost 16 months of continuous Daylight Saving Time nationwide starting in 1974. **It was wildly unpopular** – [school officials](#) in Florida blamed the deaths of six children on their having to go to school in darkness – and was cut short after just 10 months. It did not have the promised energy savings.

Americans used to have their circadian rhythms aligned with the sun for a greater portion of the year. In 1976, Daylight Saving Time started on the last Sunday in April and lasted until the last Sunday in October. **Since the mid-1970s, the US has decreased the duration of healthy Standard Time by about eight weeks.**

Oregon needs to take the lead for its citizens' health and safety and switch to year-round Standard Time as supported by the American Academy of Sleep Medicine, American Academy of Cardiovascular Sleep Medicine, the National Safety Council, the National PTA and the Oregonian. Hawaii and Arizona have been on Standard Time for over 50 years and Oregon can do the same today, without an act of Congress.

Thank you,

Kindra Crick

Oregonian, Educator, Artist, Parent and Northwest Noggin Board Member