

It's Time to Dump Daylight Saving

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It's that time of year when we “spring ahead” and switch to daylight saving time (DST). There is a good chance that this annual adjustment of the clock will damage not only your wallet but your health, too.

Before the adoption of standard measures of time, churches, city halls, and trains kept solar time. Every city, depending on its location, observed its own solar time, once referred to as “true time” in the United States. In the early 19th century, there were more than 300 “sun zones” in the U.S. alone. It wasn't until the proliferation of railways that time standardization arose to resolve logistical and scheduling nightmares and passenger confusion, not to mention fatal railroad accidents. In 1875, there were 75 different railway times in the United States, with three in Chicago and six in St. Louis alone. In 1883, the time zones we know today were introduced as Standard Railway Time. It wasn't until 1918, with the passage of the Standard Time Act, that our five current time zones (excluding Hawaii) were enacted into law.

In an attempt to conserve energy during World War I, the United States, armed with the Standard Time Act, followed Germany's lead and adopted daylight saving time. The idea was that if daylight lasted for one more hour, that was one hour less of darkness during which people would need to use artificial lighting. But in today's highly technological world, we are plugged in whether or not the sun is up. As a result, this original energy-conservation rationale for daylight saving no longer makes sense.

After the war, daylight saving time was swiftly abolished as federal law; during World War II, it was temporarily reintroduced by President Roosevelt as “War Time.” Finally, in 1966, daylight saving was federally mandated and managed with the passage of the Uniform Time Act, which also included provisions for states to opt out of DST if certain requirements were met. In 1974–75, during the oil crisis, year-round daylight saving was imposed nationwide, but it was unpopular and lasted for less than one year. It wasn't until 2005 that the daylight saving time we know today, which begins on the second Sunday of March, was written into law.

So, this Sunday, with the exception of Arizona and Hawaii, the U.S. will spring ahead for daylight saving. And yet polls suggest that 70 percent of Americans don't approve of switching

back and forth between standard time and daylight saving time. Could it be that they're on to something?

Daylight saving time, along with time zones, is a major contributor to what's known as "social jet lag." Social jet lag occurs as a result of the difference between one's biological clock (read: circadian rhythm), which is determined by natural phenomena such as when the sun is up or down, and one's social clock, which is determined by man-made schedules and time structures such as the 9–5 workday, time zones, and daylight saving. Daylight saving's contribution to social jet lag exacerbates the difference between our biological and social clocks by an additional hour, causing a mismatch between our sleep and awake rhythms and our body's other physiological functions. In short, with the annual rejection of our natural circadian rhythm, our body clocks are thrown out of whack, resulting, among other things, in serious damage to our health.

Because our body clocks don't adapt to the artificial construct of daylight saving time, there is an associated increase in the risk for metabolic diseases, such as obesity, diabetes, and cardiovascular conditions, as well as higher blood pressure and breast cancer. In addition to these long-term health effects, DST contributes to an increased risk of abnormal heart rhythms, heart attacks, and strokes. Social jet lag also contributes to an increased likelihood of depression, lower productivity, and a diminished level of performance in the classroom. And, in keeping with the common negative effects associated with a sudden loss in sleep, the switch to DST contributes to an acute increase in workplace accidents and emergency-room visits. In the U.S., fatal car crashes increase by as much as 6 percent in the week following the switch to daylight savings time.

The direct health-care costs associated with social jet lag and disruptions to our circadian rhythm have been estimated to be at least \$2.35 billion annually in the U.S. In addition, yearly productivity losses associated with missed work or less-productive work as a result of social jet lag are equivalent to 4.4 million days of work.

It's time for a complete overhaul of how we keep track of time — a practical solution that saves time and money and is good for our health, too.

We should scrap our current system of time zones and daylight savings in favor of worldwide adoption of Coordinated Universal Time (UTC), also known as Greenwich Mean Time. This would mean that everyone's watches around the world would be set at exactly the same time. The only difference they would notice, depending on where they are located, would be where the sun is in the sky at a particular hour. Thus midday would be as it is today in all parts of the world, when the sun reaches its highest point in the sky. What would be different under UTC is the time on your watch. In New York, midday would no longer be 12:00 p.m., but rather 5:00 p.m. (17:00 UTC).

The adoption of UTC would not mean that people would be going to work in darkness in certain parts of the world. Business hours would be adjusted to UTC. For example, while businesses in London would still open at 9:00 a.m. and close at 5:00 p.m., in New York, under UTC, they would open in the morning at 2:00 p.m. and close eight hours later at 10:00 p.m.

Adoption of UTC would allow for a return to "true time" — that is, solar time. With that, everyone around the world would rise with the sun in the morning and go to sleep when it's dark

at night according to their natural circadian rhythm, not some artificial time constraint. Social jet lag and its negative health effects would become a thing of the past.

Pilots, for the obvious benefits of safety, already use UTC. Wall Street uses it, too — all global stock and commodity trades are stamped in UTC. And that's not all. Virtually all modern technologies, including the Internet and GPS, have spontaneously adopted UTC. It's time for the rest of us to do the same.

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