

Did your body complain about daylight saving time?

By Randy Rieland | *Smithsonian.com*

How did your body like the switch to daylight saving time? When your alarm went off an hour early, did you want to hit the snooze button? If your body complained, it had good reason.

Most Americans lose at least an hour of sleep after setting their clocks ahead. An hour may not seem like much. Medical research, however, suggests that it has an impact on our bodies. Switching to daylight saving time has been linked with a possible increase in the car and workplace accidents. It is also linked to heart attacks and severe headaches.

One of the first persons to suggest moving the clock as the day lengthened was Ben Franklin. In 1784, he argued that having daylight last longer would save energy. Nearly 100 years later George Vernon Hudson, a New Zealand artist, proposed the idea in an 1895 paper. Why? He was an amateur insect collector and wanted more time to collect bugs after work. Some European countries adopted it soon after. Beginning in the 1940s, some US states adopted it. The federal government standardized the dates in the 1960s.

Whether “springing forward” and “falling back” actually save energy is debated. Factors such as more air-conditioning affect energy use. Arizona and Hawaii have warm climates and have not adopted daylight saving time. Neither have many countries near the equator. There, the change of light during shifting seasons is not as great as in the regions north and south.

It is clear, however, that the impact of daylight saving time on people’s sleep cycles can have some nasty health effects. For example, two Michigan hospitals recently counted heart attack victims on the first day of daylight saving. They found that they treated almost twice as many as on a typical Sunday. A Swedish study in 2008 found that the increased risk of heart attacks lasts for three days after switching to daylight saving.

What might explain these effects? The most important cue for our internal clocks is light. When we suddenly change the time by an hour, it alters the

amount of light we see during the day. The result is our internal rhythms get off kilter. So do our sleep-wake cycles, the timed release of hormones, and even our moods.

How serious are effects on the sleep cycle? More serious than you might think. Clearly sleep is important to psychological and physiological balance. So is the lack of it. Whose brain hasn't felt fuzzy from lack of sleep? But research now also links poor sleeping habits to obesity, diabetes, heart disease, and high blood pressure. A study was just published in the journal *Proceedings of the National Academy of Sciences*. It found that getting too little sleep a few nights in a row can disrupt hundreds of genes. These include including those tied to stress and fighting diseases.

Unfortunately, daylight saving time may disrupt body clocks long term. German researchers reported in October that our internal body clocks never really adjust to daylight saving time.

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