Daylight Saving Time 2012: Why and When Does It Begin?

Why do we spring forward? Do daylight savings work? Get the facts.

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With daylight saving time (also called daylight savings time) kicking off again, clock confusion is once again ticking away: Why do we spring forward? Does daylight saving time really save energy? Is it bad for your health? Get expert answers below.

When Will Daylight Savings Begin in 2012?

For most Americans, daylight saving time 2012 will begin 2 a.m. on Sunday, March 11, when most states will spring forward an hour. Time will fall back to standard time again on Sunday, November 4, 2012, when daylight saving time ends.

The federal government doesn't require U.S. states or territories to observe daylight saving time, which is why residents of Arizona, Hawaii, Puerto Rico, the Virgin Islands, American Samoa, Guam, and the Northern Marianas Islands won't need to change their clocks this weekend.

Where it is observed, daylight savings has been known to cause some problems.

National surveys by Rasmussen Reports, for example, show that 83 percent of respondents knew when to move their clocks ahead in spring 2010. Twenty-seven percent, though, admitted they'd been an hour early or late at least once in their lives because they hadn't changed their clocks correctly.

It's enough to make you wonder—why do we do use daylight saving time in the first place?

How and When Did Daylight Saving Time Start?

Ben Franklin—of "early to bed and early to rise" fame—was apparently the first person to suggest the concept of daylight savings, according to computer scientist David Prerau, author of the book *Seize the Daylight: The Curious and Contentious Story of Daylight Saving Time*.

While serving as U.S. ambassador to France in Paris, Franklin wrote of being awakened at 6 a.m. and realizing, to his surprise, that the sun would rise far earlier than he usually did. Imagine the resources that might be saved if he and others rose before noon and burned less midnight oil, Franklin, tongue half in cheek, wrote to a newspaper.

"Franklin seriously realized it would be beneficial to make better use of daylight but he didn't really know how to implement it," Prerau said.

It wasn't until World War I that daylight savings were realized on a grand scale. Germany was the first state to adopt the time changes, to reduce artificial lighting and thereby save coal for the war effort. Friends and foes soon followed suit.

In the U.S. a federal law standardized the yearly start and end of daylight saving time in 1918—for the states that chose to observe it.

During World War II the U.S. made daylight saving time mandatory for the whole country, as a way to save wartime resources. Between February 9, 1942, and September 30, 1945, the government took it a step further. During this period daylight saving time was observed year-round, essentially making it the new standard time, if only for a few years.

Since the end of World War II, though, daylight saving time has always been optional for U.S. states. But its beginning and end have shifted—and occasionally disappeared.

During the 1973-74 Arab oil embargo, the U.S. once again extended daylight saving time through the winter, resulting in a one percent decrease in the country's electrical load, according to federal studies cited by Prerau.

Thirty years later the Energy Policy Act of 2005 was enacted, mandating a controversial month long extension of daylight saving time, starting in 2007.

But does daylight saving time really save any energy?

Daylight Saving Time: Energy Saver or Just Time Suck?

In recent years several studies have suggested that daylight saving time doesn't actually save energy—and might even result in a net loss.

Environmental economist Hendrik Wolff, of the University of Washington, co-authored a paper that studied Australian power-use data when parts of the country extended daylight saving time for the 2000 Sydney Olympics and others did not. The researchers found that the practice reduced lighting and electricity consumption in the evening but increased energy use in the now dark mornings-wiping out the evening gains.

Likewise, Matthew Kotchen, an economist at the University of California, saw in Indiana a situation ripe for study.

Prior to 2006 only 15 of the state's 92 counties observed daylight saving time. So when the whole state adopted daylight saving time, it became possible to compare before-and-after energy use. While use of artificial lights dropped, increased air-conditioning use more than offset any energy gains, according to the daylight saving time research Kotchen led for the National Bureau of Economic Research in 2008.

That's because the extra hour that daylight saving time adds in the evening is a hotter hour. "So if people get home an hour earlier in a warmer house, they turn on their air conditioning," the University of Washington's Wolff said.

In fact, Hoosier consumers paid more on their electric bills than before they made the annual switch to daylight saving time, the study found.

But other studies do show energy gains.

In an October 2008 daylight saving time report to Congress (PDF), mandated by the same 2005 energy act that extended daylight saving time, the U.S. Department of Energy asserted that springing forward does save energy.

Extended daylight saving time saved 1.3 terawatt hours of electricity. That figure suggests that daylight saving time reduces annual U.S. electricity consumption by 0.03 percent and overall energy consumption by 0.02 percent.

While those percentages seem small, they could represent significant savings because of the nation's enormous total energy use.

What's more, savings in some regions are apparently greater than in others.

California, for instance, appears to benefit most from daylight saving time—perhaps because its relatively mild weather encourages people to stay outdoors later. The Energy Department report found that daylight saving time resulted in an energy savings of one percent daily in the state.

But Wolff, one of many scholars who contributed to the federal report, suggested that the numbers were subject to statistical variability and shouldn't be taken as hard facts.

And daylight savings' energy gains in the U.S. largely depend on your location in relation to the Mason-Dixon Line, Wolff said.

"The North might be a slight winner, because the North doesn't have as much air conditioning," he said. "But the South is a definite loser in terms of energy consumption. The South has more energy consumption under daylight saving."

Daylight Saving Time: Healthy or Harmful?

For decades advocates of daylight savings have argued that, energy savings or no, daylight saving time boosts health by encouraging active lifestyles—a claim Wolff and colleagues are currently putting to the test.

"In a nationwide American time-use study, we're clearly seeing that, at the time of daylight saving time extension in the spring, television watching is substantially reduced and outdoor behaviors like jogging, walking, or going to the park are substantially increased," Wolff said. "That's remarkable, because of course the total amount of daylight in a given day is the same."

But others warn of ill effects.

Till Roenneberg, a chronobiologist at Ludwig-Maximilians University in Munich, Germany, said his studies show that our circadian body clocks-set by light and darkness-never adjust to gaining an "extra" hour of sunlight to the end of the day during daylight saving time.

"The consequence of that is that the majority of the population has drastically decreased productivity, decreased quality of life, increasing susceptibility to illness, and is just plain tired," Roenneberg said.

One reason so many people in the developed world are chronically overtired, he said, is that they suffer from "social jet lag." In other words, their optimal circadian sleep periods are out of whack with their actual sleep schedules.

Shifting daylight from morning to evening only increases this lag, he said.

"Light doesn't do the same things to the body in the morning and the evening. More light in the morning would advance the body clock, and that would be good. But more light in the evening would even further delay the body clock."

Other research hints at even more serious health risks.

A 2008 study in the New England Journal of Medicine concluded that, at least in Sweden, heart attack risks go up in the days just after the spring time change. "The most likely explanation to our findings are disturbed sleep and disruption of biological rhythms," lead author Imre Janszky, of the Karolinska Institute's Department of Public Health Sciences in Stockholm, told National Geographic News via email.

Daylight Savings Lovers, Haters

With verdicts on the benefits, or costs, of daylight savings so split, it may be no surprise that the yearly time changes inspire polarized reactions.

In the U.K., for instance, the Lighter Later movement-part of 10:10, a group advocating cutting carbon emissions-argues for a sort of extreme daylight savings. First, they say, move standard time forward an hour, then keep observing daylight saving time as usual-adding two hours of evening daylight to what we currently consider standard time.

The folks behind Standardtime.com, on the other hand, want to abolish daylight saving time altogether. Calling energy-efficiency claims "unproven," they write: "If we are saving energy let's go year round with Daylight Saving Time. If we are not saving energy let's drop Daylight Saving Time!"

But don't most people enjoy that extra evening sun every summer? Even that remains in doubt.

National telephone surveys by Rasmussen Reports from spring 2010 and fall 2009 deliver the same answer. Most people just "don't think the time change is worth the hassle." Forty-seven percent agreed with that statement, while only 40 percent disagreed.

But Seize the Daylight author David Prerau said his research on daylight saving time suggests most people are fond of it.

"I think the first day of daylight saving time is really like the first day of spring for a lot of people," Prerau said. "It's the first time that they have some time after work to make use of the springtime weather.

"I think if you ask most people if they enjoy having an extra hour of daylight in the evening eight months a year, the response would be pretty positive."