

New work schedule could cure your 'social jetlag'

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Credit: xiaphias/Wikipedia

Many of us are walking around all the time in a fog caused by "social jetlag." That's what happens when we lose sleep because our daily schedules don't match our bodies' natural rhythms. The condition can be a particular problem for shift workers, who work into the night or on a shifting schedule. Now, researchers report in the Cell Press journal *Current Biology* on March 12 that sleep and workers' general wellbeing

could be improved if work schedules took workers' biological clocks into account.

"A 'simple' re-organization of shifts according to chronotype allowed workers to [sleep](#) more on workday nights," says Till Roenneberg of Ludwig-Maximilian-University in Germany. "As a consequence, they were also able to sleep less on their free days due to a decreased need for compensating an accumulating [sleep loss](#). This is a double-win situation."

Such a change might have other long-term health implications, too, although that remains to be seen. An earlier report by Roenneberg's team, also in *Current Biology*, [showed a link between social jetlag](#) and obesity, along with other unhealthy habits, including smoking cigarettes and drinking alcohol and caffeine.

The researchers got the chance to implement their ideas about sleep and work schedules in a real-world factory setting thanks to a former labor director at ThyssenKrupp Steel Europe. He was interested in finding ways to improve workers' health and lower their stress.

Factory workers were assigned to an early, late, or intermediate chronotype based on their normal sleep patterns. The researchers then implemented a chronotype-adjusted ("CTA") shift schedule. People with chronotypes on either extreme weren't assigned to the shift that would be the most challenging for them. In other words, morning people were never made to work late and night owls were never forced to get up early for work. Those with an intermediate chronotype served as controls. With the new schedule in place, the researchers watched what happened to the workers' [sleep duration](#) and quality, social jetlag, wellbeing, subjective stress perception, and satisfaction with leisure time.

With those adjusted schedules, people felt more satisfied with the sleep they did get and experienced slight improvements in their general

wellbeing. It also reduced social jetlag—the difference between the midpoint of [workers'](#) sleep on work versus free days—by one hour. The improvements weren't as great for those who naturally prefer to stay up late, they found, which shows that night work is hard on everyone. After all, Roenneberg says, even people who like to stay up late aren't nocturnal.

While the new findings weren't exactly a surprise, Roenneberg says, it was still "utterly satisfying to find that theory actually works in the real and 'dirty' world. In so many cases it doesn't."

The findings also show that flexible [work schedules](#) aren't just more convenient, they can really make a difference in the way we feel, and perhaps also for our long-term health. To further explore the connections between shift work and health, the researchers are conducting experiments designed to replicate what they've seen in their field and epidemiological studies in laboratory mice. They hope the evidence will ultimately lead to changes in work cultures and in the way people generally choose to manage their time.

"We know that sleep has important implications not only on physical health but also on mood, stress, and social interactions, so that improving sleep will most probably result in many other positive side effects," says Céline Vetter, the first author of the study.

More information: *Current Biology*, Vetter et al.: "Aligning Work and Circadian Time in Shift Workers Improves Sleep and Reduces Circadian Disruption" [www.cell.com/current-biology/a...0960-9822\(15\)00128-1](http://www.cell.com/current-biology/a...0960-9822(15)00128-1)

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