

Light exposure during sleep may increase insulin resistance

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According to preliminary results from a new study, nighttime light exposure during sleep may affect metabolic function. The aim of this study was to test the hypothesis that light exposure at night during sleep

adversely impacts metabolic outcomes.

"Our preliminary findings show that a single [night](#) of [light exposure](#) during sleep acutely impacts measures of insulin resistance," said lead author Ivy Cheung Mason, Ph.D., who was a postdoctoral fellow at Northwestern University Feinberg School of Medicine when this study was conducted. "Light [exposure](#) overnight during sleep has been shown to disrupt sleep, but these data indicate that it may also have the potential to influence metabolism."

In addition to Mason, the study authors include: Phyllis C. Zee, MD, Ph.D., professor and principal investigator; Daniela Grimaldi, MD, Ph.D., assistant professor; Kathryn J. Reid, Ph.D., professor; and Roneil Malkani, MD, assistant professor. All work at Feinberg School of Medicine, in the Department of Neurology.

Twenty healthy adults ages 18 to 40 were randomized into Dark-Dark (DD) or Dark-Light (DL) groups and run in parallel for a three day and two night stay. Participants had eight hours of sleep opportunity each night starting at habitual bedtime determined from one week of actigraphy with sleep diary. The DL group (n=10, 2 males, ages 26.61 ± 4.64 years) slept in the dark light of 100 lux on Night 2, while the DD group (n=10, 4 males, ages 26.78 ± 5.15 years) slept in the dark

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