

# Study shows a drink before bed can cause reductions in REM sleep

January 26 2024, by Bob Yirka

## Experimental Design

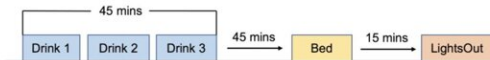
### Demographics:

N	Female 15	Male 15
Age	31 +/- 11.6	35 +/- 12.5
Race	11 White, 1 Black, 1 Asian, 2 more than 1 race	13 White, 2 Black
Ethnicity	2 Hispanic, 13 non-Hispanic	15 non-Hispanic

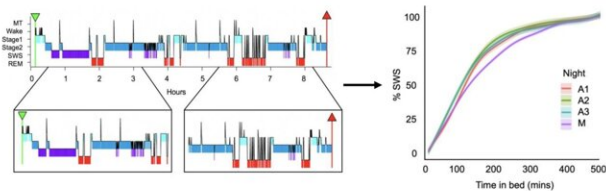
### Sleep Stabilization Schedule:

Days 1-8	8 hrs in bed +/- 30 mins.	Home
Days 9-11	8 hrs in bed +/- 30 mins.	In lab week 1
Days 12-15	8 hrs in bed +/- 30 mins.	Home
Days 16-18	8 hrs in bed +/- 30 mins.	In lab week 2

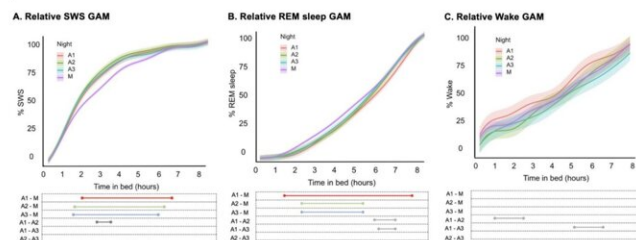
### Alcohol Administration Protocol:



## Generalized Additive Modeling



## Results



Credit: *SLEEP* (2024). DOI: 10.1093/sleep/zsae003

A team of neuroscientists and sleep researchers at E.P. Bradley Hospital Sleep Research Laboratory, working with colleagues from Brown University and Providence VA Medical Center, has found that rather than improving sleep, consuming an alcoholic beverage before bed can cause a reduction in REM sleep. The group describes their [sleep experiments](#) in the journal *Sleep*.

Prior research has shown that REM sleep takes up approximately 20% of a typical night's sleep, but is still important. Though scientists have not yet figured out the purpose of REM sleep, they do know that people who do not get enough can experience [emotional problems](#), mental acuity difficulties and memory issues.

In this new study, the researchers explored whether consumption of alcohol prior to sleep might have a positive or negative impact on sleep quality and REM sleep in particular. To find out, they recruited 30 adult volunteers who spent three consecutive days and nights in a sleep lab on two occasions, where their brains could be monitored as they slept.

To assess the impact of having a nightcap before going to bed, the researchers served only a mixer (non-alcoholic ingredients typically used to make cocktails) on one of their stays, and a mixer with added alcohol on the other. Both times the drink was consumed one hour before the [volunteer](#) went to bed.

The research team found that drinking just one [alcoholic beverage](#) led to an increase in [slow-wave sleep](#) across all three nights. It also decreased the duration of REM sleep. Overall, they found that the volunteers were able to fall asleep faster after consuming alcohol, but their quality of sleep suffered due to shortened REM periods.

They also noted that drinking an alcoholic beverage on consecutive nights did not change the amount of REM sleep impacted—their body did not adapt to overcome the effects of alcohol. The team concludes that [drinking](#) even a small amount of alcohol before bed can adversely affect sleep quality.

**More information:** Katie S McCullar et al, Altered sleep architecture following consecutive nights of pre-sleep alcohol, *SLEEP* (2024). [DOI: 10.1093/sleep/zsae003](#)

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Citation: Study shows a drink before bed can cause reductions in REM sleep (2024, January 26)  
retrieved 13 May 2024 from <https://medicalxpress.com/news/2024-01-bed-reductions-rem.html>

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