

Alcohol and the Sleep of Elite Athletes

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INTRODUCTION

Extensive evidence indicates that alcohol adversely affects athletic performance, increases the chance of injury, impairs aerobic metabolism, and has detrimental psychological influence.

Sleep is essential to musculoskeletal recovery, acquisition of new skills, and emotional regulation in athletes.

As insufficient sleep has detrimental effects on athletic performances and increases the risk of injury, we aimed to analyze the relation between alcohol consumption and sleep parameters among elite athletes.



METHODS

We studied 9,164 nights recorded with the Boost application (by SleepRate) by 66 adult elite athletes from various sports during October 2019 - December 2020.

Night recordings included:

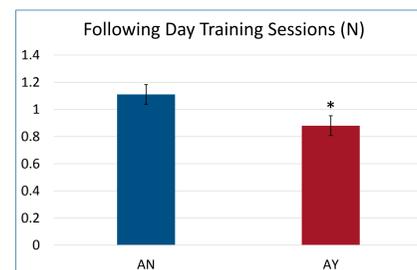
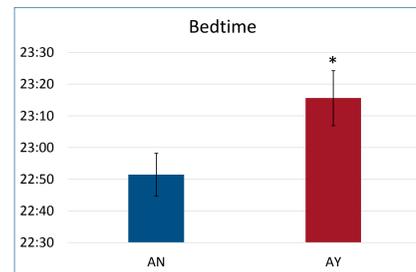
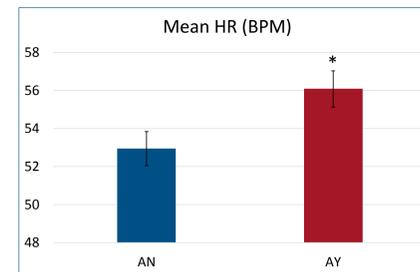
- Perceived and measured sleep parameters
- Reported previous day alcohol consumption
- Reported previous day number of training sessions

For each athlete, the average nightly mean heart rate (HR) in nights with reported alcohol consumption (AY) and without (AN) was calculated, as were the bedtime and the number of training sessions.

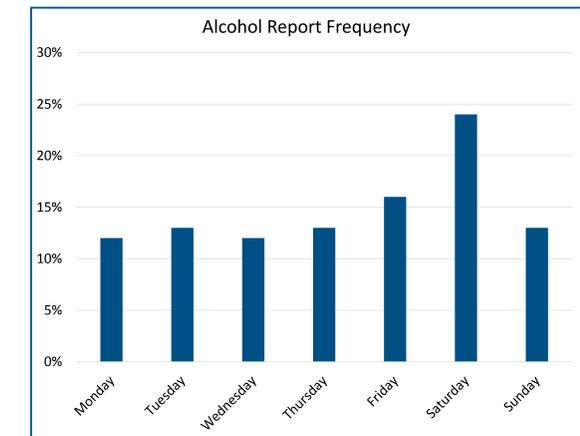
RESULTS

In nights with reported alcohol, on average, athletes:

- Had higher nocturnal mean HR
- Went to bed later
- Reported fewer training sessions in the following day



Frequency of reported alcohol consumption was higher during weekend nights, with almost a quarter of recorded Saturday nights included reports of alcohol intake.



CONCLUSION

Adult elite athletes report consuming alcohol, especially during weekends when the probability for a training session the following day is lower. Our data support the well documented physiological effect of alcohol via elevated mean HR values throughout the night.

Athletes and coaches should be educated about the impacts of alcohol and insufficient sleep on wellbeing and performance.