

Good sleep-time recovery is associated with a healthier diet and lower alcohol consumption

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The association of physiological recovery with nutrition has been studied only scarcely. Published in the *Journal of Occupational Medicine and Toxicology*, a new study now investigates whether physiological recovery



during sleep relates to eating behavior and diet quality.

The study population consisted of 252 psychologically distressed adults with overweight, who participated in a lifestyle intervention study in three Finnish cities. Their <u>recovery</u> was measured on the basis of sleeptime <u>heart rate variability</u> recorded on three consecutive nights. Heart rate variability was used to measure both parasympathetic and sympathetic activation of the autonomic nervous system, and their relation, i.e., the balance between stress and recovery. The <u>parasympathetic nervous system</u> plays a key role in recovery, during which heart rate is decreased and <u>heart rate</u> variability is high.

The study participants' eating behavior was measured using four different questionnaires, and their diet quality and <u>alcohol consumption</u> was quantified using two different questionnaires and a 48-hour dietary recall. The aim was to explore the association between physiological recovery, diet quality, alcohol consumption and different aspects of eating behavior, such as eating according to hunger and satiety cues. The present results are from the data collected at baseline before the lifestyle intervention.

According to the study, higher sleep-time parasympathetic activity, which is indicative of better physiological recovery, associates with more health-promoting diet quality and lower alcohol consumption, and possibly also with eating habits, especially factors affecting our decision to eat. Especially participants with a good stress balance reported better overall diet quality, higher fiber intake, stronger dietary self-control and lower alcohol consumption than those with a poorer stress balance.

However, the researchers point out that the cross-sectional study design allows no causality conclusions. In other words, it cannot be concluded from the results if better recovery leads to a healthier diet or if a healthy diet supports better recovery.



More information: Elina Järvelä-Reijonen et al, Sleep-time physiological recovery is associated with eating habits in distressed working-age Finns with overweight: secondary analysis of a randomised controlled trial, *Journal of Occupational Medicine and Toxicology* (2021). DOI: 10.1186/s12995-021-00310-6

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