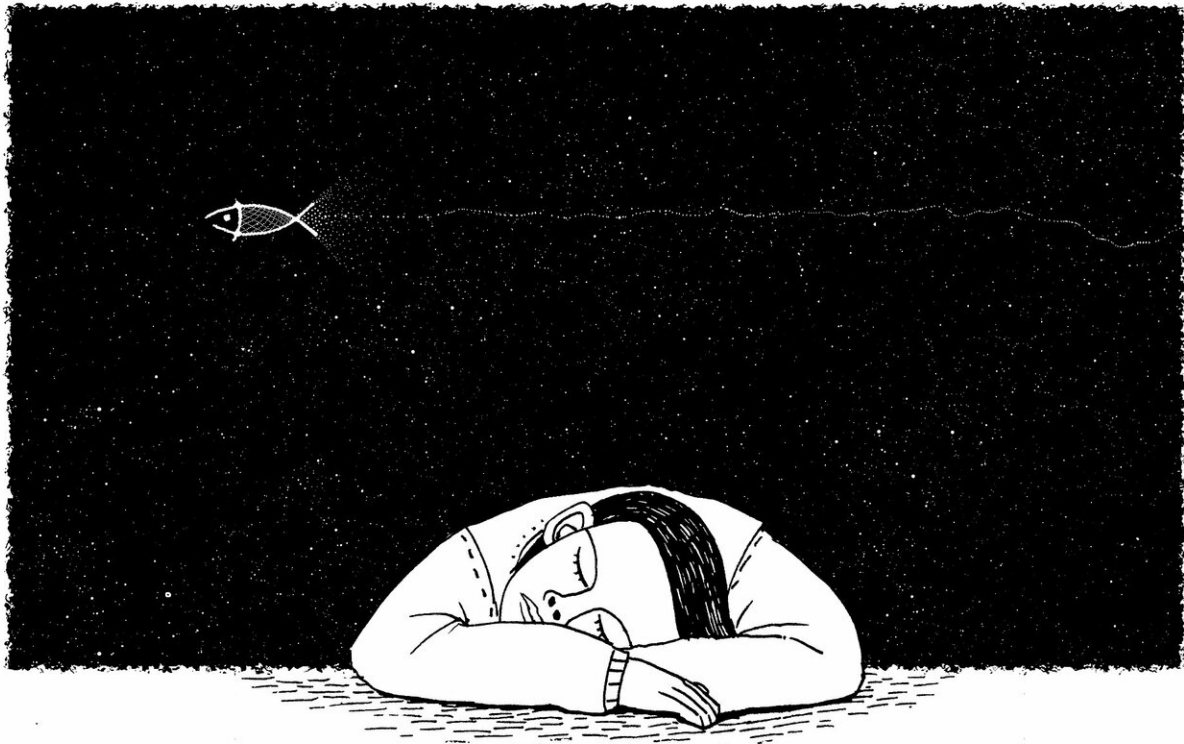


# Dodgy diet affects daytime drowsiness

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Efforts to understand excessive daytime sleepiness have resulted in researchers finding that a high intake of saturated fats and carbohydrates increases the risk of excessive daytime sleepiness.

It's a significant problem which needs arresting. Excessive daytime

sleepiness affects about 15% of Australia's general population and is associated with health and societal consequences from increased risk of work-related errors and injuries, to cardiovascular diseases and mortality.

Flinders University researcher Dr. Yohannes Adama Melaku says these findings—which are a part of the expansive North West Adelaide Health Study (NWAHS) that has examined data of 4033 participants aged 18-90 years between 1999-2000 and 2018—had been inspired by [diet](#)-related excessive feeling of sleepiness observations that had previously been identified in much smaller studies.

"We saw a great opportunity to examine daytime sleepiness outcomes within a much larger sample size," Dr. Melaku says. "It was taking a theory out of the laboratory and seeing if it applied in the general population. And we found that it has.

"Unique to this study, we applied advance methods to investigate the substitution effect of one macronutrient by other macronutrients. In other words, we looked at the effect of changing nutrients in the diet without changing the amount of calories consumed, allowing us to demystify the interplay and complex interaction among macronutrients in predicting daytime sleepiness," adds Dr. Melaku.

The published paper—"Association between macronutrient intake and excessive daytime sleepiness: an iso-caloric substitution analysis from the North West Adelaide Health Study," by Yohannes Melaku, Amy Reynolds (from CQ University), Tiffany Gill, Sarah Appleton and Flinders University's Professor Robert Adams—has been published in the journal *Nutrients*.

In summary, it shows that saturated fat intake was positively associated with feeling sleepy during the day, with a modest similar association of

carbohydrate intake. However, protein was inversely associated with excessive daytime sleepiness, and Dr. Melaku and Professor Adams believe more research needs to be done about whether replacing high saturated fats and carbohydrates with more protein in a diet will remedy excessive daytime sleepiness problems in patients.

"This study highlights the important role of diet in predicting risk of daytime sleepiness among adults," says Professor Adams, who is Medical Director of the Adelaide Institute for Sleep Health at Flinders University.

"People who have [sleep](#) related disorders (such as Obstructive Sleep Apnea patients) and disturbed circadian rhythm, such as shift-workers, could benefit from dietary interventions to alleviate excessive daytime sleepiness.

"In addition, the findings of this study have significant implications for alertness and concentration, which would be of particular concern to workers in certain industries.

"Our findings can assist in the design of trials involving substitution of food types in populations with excessive daytime sleepiness."

The publication of this paper comes after the recent release of other interesting reports stemming from the North West Adelaide Health Study (NWAHS) – a report card of Adelaide's 'working class' suburbs, which has confirmed strong connections between longevity and socioeconomic considerations.

The study—funded by the Hospital Research Foundation, Freemason's Foundation Centre for Men's Health and the University of Adelaide—also showed that preventable cardiovascular disease continues to prematurely claim the majority of lives in Adelaide

industrial suburbs, despite awareness of healthy diet, moderate exercise and cutting out smoking and alcohol.

**More information:** Melaku et al. Association between Macronutrient Intake and Excessive Daytime Sleepiness: An Iso-Caloric Substitution Analysis from the North West Adelaide Health Study, *Nutrients* (2019). DOI: [10.3390/nu11102374](https://doi.org/10.3390/nu11102374)

Provided by Flinders University

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