

# Fruits, veggies could help young adults improve sleep

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Increasing consumption of fruits and vegetables could help young adults sleep better, especially young women, a new University of Michigan study shows.

Young adults who reported consuming less than five servings of fruits and vegetables per day reported a high prevalence of chronic insomnia symptoms, with over one-third reporting difficulties with falling asleep or maintaining sleep at least three times per week for three months or longer.

Women who were able to increase their fruit and vegetable intake by three or more servings over a three-month period were more than twice as likely to experience an improvement in these insomnia symptoms, according to the study published in the *Sleep Health Journal*.

"We were very excited to see that a fairly simple dietary intervention, such as encouraging an increase in fruit and vegetable consumption, could make such an impact on sleep," said Erica Jansen, lead author of the study and research assistant professor of nutritional sciences at U-M's School of Public Health. "We know from other literature that improving sleep improves overall quality of life and many other [health outcomes](#), so the benefits likely extend beyond the sleep changes."

Jansen and senior author Gwen Alexander, a researcher in the Department of Public Health Sciences at Henry Ford Health System, and colleagues analyzed data of more than 1,400 participants compiled by Detroit-based Henry Ford and the more rural Geisinger Health System headquartered in Danville, Pennsylvania.

"From my [health](#) educator perspective, our study shows a link between dietary choices and improved sleep for [young people](#) who wish to improve their overall health and well-being," Alexander said. "Our study was unique in that it investigated an understudied population of generally healthy young adults. Future research designed for this population has great potential to lead to better health habits."

Eligible [young adults](#) included those ages 21-30, who received any

medical care at the centers and who reported eating less than five servings of fruits and vegetables per day. Participants were randomized into one of three groups: one had an untailored web-based program to encourage higher fruits and vegetables consumption; the second had an age-targeted tailored web-based program; and the third group also included personalized e-coaching support.

Young adults who increased their fruit and vegetable consumption by at least three servings experienced modest improvements in sleep latency (time to fall asleep) and insomnia over a three-month period, compared to participants with no change or smaller increases in fruits and vegetable intake, although there were no differences in sleep duration.

Women who increased their fruit and vegetable intake by three or more servings reported a four-minute shorter time, on average, to fall asleep at follow-up, and twofold higher odds of improvement in insomnia symptoms.

"What is unique about our study is that we were able to see that as fruit and vegetable intake changed, insomnia-related sleep characteristics also changed," Jansen said. "We still cannot rule out that sleep characteristics changed first, which in turn caused a change in fruit and [vegetable](#) intake, but since the participants were part of a trial to increase [fruit](#) and [vegetable intake](#), it is more likely the other way around. The participants were not told to change anything about their sleep habits."

The researchers hope the findings will be incorporated into other [sleep](#) hygiene principles, which include things like maintaining a consistent bedtime and rise time, eliminating screens prior to going to bed, sleeping in a dark, cool environment, and not consuming caffeine or alcohol before bed.

**More information:** Erica C. Jansen et al. Changes in fruit and

vegetable consumption in relation to changes in sleep characteristics over a 3-month period among young adults, *Sleep Health* (2021). DOI: [10.1016/j.sleh.2021.02.005](https://doi.org/10.1016/j.sleh.2021.02.005)

Provided by University of Michigan

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