

New Study Suggests Walnuts May Fend Off Stress-Related Negative Impacts In University Students

Walnut Consumption showed a protective effect against academic stress and the potential to improve sleep

ISTANBUL, TURKEY, January 1, 2023 /EINPresswire.com/ -- Being a university student is an especially stressful time in life. In fact, eight in 10 university students report experiencing frequent bouts of stress and 61% of university students seek counseling for anxiety, depression or other needs.¹

A novel study published in *Nutrients* from researchers at the University of South Australia found that eating two ounces of walnuts a day for 16 weeks in undergraduate university students improved self-reported mental health indicators, had a protective effect against some of the negative impacts of academic stress, and aided self-reported sleep quality in the longer term.²

"We've always known walnuts to be a health-promoting food, but because of the design and length of this study, the findings really paint a picture of how a simple food like walnuts can help combat stress," explains Mauritz F. Herselman, a PhD student who worked on this study.

In this randomized clinical trial, co-funded by the University of South Australia and the California Walnut Commission, the participant group who ate walnuts also experienced an increase in metabolic markers that are linked with protection against stress.

Additionally, in females only, eating walnuts may have countered the negative effects of academic stress on the diversity of the gut bacteria.



California Walnut Commission

“University students are a unique population of people who transition into their adulthood while completing university degrees which can be challenging and stressful. The pressure to complete and find attractive jobs is high and can impact on students’ mental and physical health and overall well-being,” states Larisa Bobrovskaya, Associate Professor of Clinical and Health Sciences at the University of South Australia and lead researcher on the study.

“Thus, managing academic stress is important and various strategies can be adopted by students to get through their university journeys. Dietary intervention is one of such strategies that can boost students’ brain health but is often neglected by students,” she adds.

Stress Level of Youth in UAE

In the Arab world, it is estimated that approximately 17.7% of the population suffers from depression. Students and young people are also affected by mental health problems. Students face many challenges related to their studies, such as the burden of exams and assignments, lack of sleep, and concerns about future employment, society’s expectations, and higher studies. Research suggests there is a high prevalence of depression, anxiety, and stress symptoms among students. Based on the study of ‘State of Emotional Health Disorders of Undergraduate Students in the United Arab Emirates’, the prevalence rates of depression, anxiety, and stress among university students in one Emirates in UAE were 38%, 55%, and 29%, respectively³.

Study Overview

University students aged 18 to 35 were randomly selected to be in either a treatment group or control group for 16 weeks of this study.

The treatment group was provided with pre-portioned walnuts and asked to consume one portion (approximately 56 grams) per day. The control group was asked to refrain from consuming any type of nut or fatty fish for the same duration.

Participants provided blood and saliva samples and completed a series of self-reported questionnaires on mental health, mood, general well-being, and sleep habits three times during the study. A subgroup of participants also provided fecal samples at each clinical visit. A total of 60 participants, 30 in each group, completed the study.



California Walnuts

Promising Results for Walnuts

The group eating walnuts seemed to experience a protective effect against some of the negative impacts of academic stress on mental health compared to the control group. A summary of the study findings can be found in Table 1.

Table 1. The effects of walnut consumption on mental health and general well-being in university students.

- Daily consumption of walnuts prevented the significant changes in mental health-related scores and scores of stress and depression. Walnuts may alleviate the negative effects of academic stress on mental health in university students.
- Daily consumption of walnuts increased total protein and albumin levels, thus may protect against the negative effects of academic stress on metabolic biomarkers.
- While academic stress did not change stress biomarkers such as cortisol and α -amylase, daily walnut consumption decreased α -amylase levels, further suggesting that walnuts may protect against the effects of stress.
- Academic stress was associated with lower gut microbial diversity in females. But, daily walnut consumption may alleviate the negative effects of academic stress on the diversity of the gut microbiota in females.
- Walnut consumption may improve sleep in the longer term.

Other emerging, but consistent evidence from observational and clinical research suggests eating walnuts is associated with:⁴⁻⁶

- Lower prevalence and frequency of depressive symptoms in U.S. adults
- Improved mood in otherwise healthy young adults and
- A greater likelihood of achieving overall health at an older age, with mental health as a domain of healthy aging

In fact, walnuts have a unique matrix of bioactive nutrients and phytochemicals that may underlie the beneficial effects on mental health seen in these studies.⁷

“While more supporting research is needed, evidence is becoming clear that consuming walnuts as a healthy eating pattern may have positive effects on cognition and mental health, potentially owing to their abundance in omega-3 ALA content,*” explains Bobrovskaya.

“Furthermore, research has shown that increasing dietary tryptophan, which the brain uses to make serotonin (a natural mood stabilizer), results in reduced symptoms of anxiety and depression.⁸ Thus, the presence of tryptophan in walnuts may have also contributed to these findings,” she notes.

These results are encouraging and support previous results found in similar populations, but there are limitations to the current study. Mainly, participants were not blinded to the walnut treatment. Additionally, the results could have been further influenced by the 2020 COVID-19 pandemic and stay-at-home orders, as clinical visits were disrupted during this period.

Further work is needed to improve the understanding of the complex pathways through which eating patterns that include walnuts can influence the brain or affect mental health.

Adding walnuts to daily eating patterns could be one small, versatile, simple, and accessible dietary change to promote brain health and overall well-being in university-aged students.

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*Walnuts are the only nut with an excellent source of the omega-3 alpha-linolenic acid, or ALA, per serving (2.5 g ALA/oz).

Peer-reviewed paper:

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About California Walnut Commission:

The California Walnut Commission, established in 1987, is funded by mandatory assessments of the growers. The Commission is an agency of the State of California that works in concurrence with the Secretary of the California Department of Food and Agriculture (CDFA). The CWC is mainly involved in health research and export market development activities. For more industry information, health research and recipe ideas, visit www.californiawalnuts.ae/.

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