

Study finds non-nutritive sweeteners do not affect blood glucose or other endocrine responses

February 22 2023



Credit: Pixabay/CC0 Public Domain

New research conducted by a team of scientists at the University of Toronto has shown that non-nutritive sweeteners (NNS) do not increase

blood glucose or other endocrine responses. The researchers conducted a "systematic review and network meta-analysis" of acute trials comparing the effects of NNS beverages with water and sugar-sweetened beverages (SSBs) in humans to examine how these mechanisms work in the real world.

Supported by IAFNS, the [systematic review](#) and network meta-analysis of 36 acute feeding trials involved 472 predominantly healthy participants. The study compared the effects of NNS beverages sweetened with single or blends of NNS with water and SSBs sweetened with various caloric sugars. The research looked at postprandial glucose and endocrine responses. The results show that NNS beverages sweetened with single or blends of NNS had no acute metabolic and endocrine effects, similar to the effects of water.

These findings [support](#) the mechanism proposed by several epidemiological and experimental studies related to NNS consumption that show that NNS benefit is due to replacement of excess calories. This study shows that in acute settings, the effect of NNS was similar to water which supports substituting SSBs with NNS beverages for cardiometabolic benefits. In addition to single sweeteners, blends of NNS were also tested which also showed similar effects to water.

Overall, the study provides support for NNS beverages as an alternative replacement strategy for SSBs. The study's findings may help dispel concerns about the [potential health risks](#) associated with NNS consumption and provide a strategy where people may choose NNS beverages as a healthier alternative to [sugar-sweetened beverages](#).

According to one of the authors, Dr. Tauseef Khan, "These findings suggest that NNS beverages are a viable alternative to SSBs, as they have no acute metabolic and endocrine effects similar to water. The study's results are relevant to the debate on the potential health risks associated

with NNS consumption and provide further evidence that they may not pose harm but actually be of benefit when replacing excess calories."

The findings are published in the journal *Nutrients*.

More information: Roselyn Zhang et al, The Effect of Non-Nutritive Sweetened Beverages on Postprandial Glycemic and Endocrine Responses: A Systematic Review and Network Meta-Analysis, *Nutrients* (2023). [DOI: 10.3390/nu15041050](https://doi.org/10.3390/nu15041050)

Provided by Institute for the Advancement of Food and Nutrition Sciences

Citation: Study finds non-nutritive sweeteners do not affect blood glucose or other endocrine responses (2023, February 22) retrieved 26 April 2024 from <https://medicalxpress.com/news/2023-02-non-nutritive-sweeteners-affect-blood-glucose.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.