

Study shows the health benefits of pecans, which can curb obesity and reduce inflammation

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A new research study shows pecans can help prevent obesity and reduce inflammation. Credit: Texas A&M AgriLife photo by Laura McKenzie

Daily consumption of pecans can prevent obesity and a host of related

health issues like fatty liver disease and diabetes, according to a collaborative study by Texas A&M AgriLife scientists.

"Obesity and diabetes numbers are increasing in modern society worldwide, and the trend in high fat diet consumption is one of the main reasons besides lifestyle and [genetic predisposition](#)," said Luis Cisneros-Zevallos, Ph.D., professor of horticulture and [food science](#) in the Department of Horticultural Sciences in the Texas A&M College of Agriculture and Life Sciences and affiliate scientist in the Institute for Advancing Health Through Agriculture.

Cisneros-Zevallos, principal investigator for the study, published "Pecans and Its Polyphenols Prevent Obesity, Hepatic Steatosis and Diabetes by Reducing Dysbiosis, Inflammation and Increasing Energy Expenditure in Mice Fed a High-Fat Diet" in the *Nutrients* journal.

He explains pecans help humans maintain body weight and prevent diabetes despite consumption of a high fat diet.

Cisneros-Zevallos's work provides scientific evidence supporting the [traditional knowledge](#) in the Americas that pecans are highly nutritious, said Amit Dhingra, Ph.D., head of the Department of Horticultural Sciences.

"Thanks to Dr. Cisneros-Zevallos' work, we now know what potential mechanisms underlie that nutritional benefit," he said. "Our department is focused on the areas of sustainability, wellness and food security, and this research illustrates the relevance of horticultural crops for human health."

Pecans provide health benefits

The study was conducted by an interdisciplinary collaboration with the

National Institute of Medical Sciences and Nutrition Salvador Zubiran, Mexico.

Cisneros-Zevallos said researchers applied pecans and high fat diets to mice and found that pecans increased energy expenditure and reduced dysbiosis and inflammation. The study confirmed that pecans modulate adipose tissue lipolysis and mitochondrial oxidative metabolism in the liver and skeletal muscle.

He also noted the anti-inflammatory properties of pecans observed in the study reduced low-grade inflammation that leads to chronic inflammation and the development of a range of prevalent diseases.

The new functionality makes pecans a superfood, which can be consumed directly or utilized in the growing markets of functional foods and dietary supplements. The initial estimate is that a person weighing around 130 pounds should consume 22 to 25 pecans per day to achieve health benefits.

Identifying new ways to consume pecans

Cisneros-Zevallos said the [collaborative research](#) will lead to future clinical studies designed to further understand the [pecan](#).

"This observation is key when designing strategies for studies, the more we know of unique functionalities of pecans, the more possibilities to create healthier products" Cisneros-Zevallos said. "Pecans are of economic and historical importance to Texas and the U.S., and their production provides stability to farmers. This work will aid in the development of novel uses and products from pecans."

More information: Claudia Delgadillo-Puga et al, Pecans and Its Polyphenols Prevent Obesity, Hepatic Steatosis and Diabetes by

Reducing Dysbiosis, Inflammation, and Increasing Energy Expenditure in Mice Fed a High-Fat Diet, *Nutrients* (2023). [DOI: 10.3390/nu15112591](https://doi.org/10.3390/nu15112591)

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