

Partially replacing red/processed meat with plant protein can increase lifespan and mitigate climate change: Study

February 27 2024



Credit: Pixabay/CC0 Public Domain

The latest [Canada's Food Guide](#) presents a paradigm shift in nutrition advice, nixing traditional food groups, including meat and dairy, and

stressing the importance of plant-based proteins. Yet, the full implications of replacing animal with plant protein foods in Canadians' diets are unknown.

New research at McGill University in collaboration with the London School of Hygiene & Tropical Medicine provides compelling evidence that partially substituting animal with plant [protein](#) foods can increase life expectancy and decrease greenhouse gas emissions. Importantly, it also suggests that benefits depend on the type of animal protein being replaced.

The study, "Partial substitutions of animal with plant protein foods in Canadian diets have synergies and trade-offs among nutrition, health and climate outcomes," was [published](#) in *Nature Food*.

The study drew data from a national nutrition survey to analyze Canadians' dietary records. The study modeled partial replacements (25% and 50%) of either red and processed meat or dairy with plant protein foods like nuts, seeds, legumes, tofu, and fortified soy beverages, on a combination of nutrition, health, and climate outcomes.

Small dietary changes, big impact on carbon footprint

Red and processed meat and dairy are the primary contributors to Canada's diet-related greenhouse gas emissions, as evidenced in a previous study. Remarkably, this study found a person's diet-related [carbon footprint](#) plummets by 25% when they replace half of their intake of red and processed meats with plant protein foods. On the other hand, dairy substitutions showed smaller reductions of up to 5%.

"We show that co-benefits for human and planetary health do not necessarily require wholesale changes to diets, such as adopting restrictive dietary patterns or excluding certain food groups altogether

but can be achieved by making simple partial substitutions of red and processed meat, in particular, with plant protein foods," explains Olivia Auclair, first author and recent Ph.D. graduate in McGill's Department of Animal Science.

Sex gap in plant-based health benefits

Diets high in animal products are known to increase the risk of heart disease, diabetes, and certain cancers. In this study, researchers estimated that if half of the red and processed meat in a person's diet was replaced with plant protein foods, they could live on average, nearly nine months longer, stemming from a reduced risk of chronic disease.

When broken down by sex, males stand to gain more by making the switch, with the gain in life expectancy doubling that for females. In contrast, partially replacing dairy with plant protein foods led to smaller gains in [life expectancy](#) and was accompanied by a trade-off: an increased calcium inadequacy by up to 14%.

"I hope our findings will help consumers make healthier and more sustainable food choices and inform future food policy in Canada," says senior author Sergio Burgos, Associate Professor in McGill's Department of Animal Science and scientist at the Research Institute of McGill University Health Center.

As more people seek sustainable and health-conscious diets, the study's findings serve as a guide, empowering individuals to make informed choices that benefit both personal well-being and the planet.

"Increasing the consumption of plant-based foods alongside reductions in red and processed meat would have considerable benefits for health and the environment and would involve relatively small changes in diets for most people in Canada," says Patricia Eustachio Colombo, co-author

and Honorary Research Fellow at the London School of Hygiene & Tropical Medicine's Center on Climate Change & Planetary Health.

More information: Olivia Auclair et al, Partial substitutions of animal with plant protein foods in Canadian diets have synergies and trade-offs among nutrition, health and climate outcomes, *Nature Food* (2024). [DOI: 10.1038/s43016-024-00925-y](https://doi.org/10.1038/s43016-024-00925-y)

Provided by McGill University

Citation: Partially replacing red/processed meat with plant protein can increase lifespan and mitigate climate change: Study (2024, February 27) retrieved 28 April 2024 from <https://medicalxpress.com/news/2024-02-partially-redprocessed-meat-protein-lifespan.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.