Nutritious foods have lower environmental impact than unhealthy foods

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Widespread adaptation of healthier diets would markedly reduce the environmental impact of agriculture and food production, according to new research from the University of Minnesota and Oxford University.

For the first time, researchers have tied the health impacts of foods to their overall environmental impact. The report, published Monday in the journal *Proceedings of the National Academy of Sciences* (*PNAS*), concludes that foods with positive health outcomes have among the lowest environmental impacts, while other foods, such as red meat, can be especially harmful to both.

"The foods making up our diets have a large impact on both ourselves and our environment. This study shows that eating healthier also means eating more sustainably," said David Tilman, professor of ecology, evolution and behavior at the University of Minnesota College of Biological Sciences.

"Normally, if a food product is good for one aspect of a person's health, it's better for other health outcomes, as well. The same holds for environmental outcomes."

The researchers explored how consuming 15 different food groups is, on average, associated with five different health outcomes and five aspects of environmental degradation.

Their results show that:

- almost all foods associated with improved health outcomes (e.g., whole grain cereals, fruits, vegetables, legumes, nuts and olive oil) have the lowest environmental impacts;
- likewise, foods with the largest increases in disease risks—primarily unprocessed and processed red meat such as pork, beef, mutton and goat—are consistently associated with the largest negative environmental impacts;
- the two notable exceptions are fish, a generally healthier food with moderate environmental impacts, and sugar-sweetened beverages, which pose health risks but have a low environmental

impact.

Researchers concluded that transitioning diets toward greater consumption of healthier foods would also improve environmental sustainability.

The study underscores recent recommendations from the United Nations and others about the environmental impacts of human diets. An August report from the UN's Intergovernmental Panel on Climate Change recommended individuals eat more plant-based foods as a way to adapt to and limit worsening climate change.

"This study shows that replacing red meat with more nutritious options can greatly improve health and the environment," said Jason Hill, bioproducts and biosystems engineering professor at the University of Minnesota College of Food, Agricultural and Natural Resource Sciences.

"It's important that all of us think about the health impacts of the foods we eat. We now know that making our nutrition a priority will pay dividends for the Earth, as well."

  More information: Michael A Clark el al., "Multiple health and environmental impacts of foods," *PNAS* (2019). www.pnas.org/cgi/doi/10.1073/pnas.1906908116

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