

Eating for your health is also better for the environment, study shows

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So, you want to reduce your carbon footprint? You might consider improving your diet.

It turns out that healthy eating isn't just good for your body, it can also lessen your impact on the environment.

Scientists say that [food](#) production including growing crops, raising livestock, fishing and transporting all that food to our plates is responsible for 20 percent to 30 percent of total global [greenhouse gas emissions](#).

In addition, 33 percent of the ice-free land on our planet is being used to grow our food, researchers say.

But altering our diets could change that.

A new study published Monday in *PNAS* found that if citizens in 28 high-income nations such as the United States, Germany and Japan actually followed the [dietary recommendations](#) of their respective governments, [greenhouse gases](#) related to the production of the food they eat would fall by 13 percent to 25 percent.

At the same time, the amount of land it takes to produce that food could drop by as much as 17 percent.

"At least in high-income countries, a healthier [diet](#) leads to a healthier environment," said Paul Behrens, an environmental scientist at Leiden University in the Netherlands who led the work. "It's win-win."

To come to this conclusion, Behrens turned to Exiobase, a massive input-output database that represents the entire world economy. It allowed him to track not only the environmental cost of growing and raising the various types of food we consume, but also the cost of the machinery involved in the production of that food, and the cost of getting it into our supermarkets and eventually onto our plates.

The database also takes into account that some countries are more efficient at producing food than others. For example, growing tomatoes in England takes more energy than growing them in Spain, where it is warmer. Similarly, a steak from a grain-fed cow in England has a smaller environmental footprint than one from a grass-fed cow in Australia.

"It's superb that we have this information," Behrens said. "You can trace the impact of any consumption across the world."

For this study, Behrens gathered data on the average diets of people living in 39 countries as well as the dietary recommendations put out by governments in those countries. To make sure the results represented the recommended ways of eating and not just eating less, he kept the calorie counts of both diets the same, and only altered the percentage of the different food groups that people actually eat, and how much their governments suggest they eat.

Next, he fed those data points into Exiobase and compared the outcome.

Specifically, he looked at three ways the environment is affected by our diets - greenhouse gas emissions, land use and eutrofication, which is the addition of nutrients to water sources that can lead to toxic algae blooms and lack of oxygen in the water. Eutrofication is usually caused by the discharge of animal waste (dung) and plant fertilizer.

The results were far from uniform, but in broad strokes, he found that the wealthiest countries would lower their [environmental impact](#) if their citizens followed nationally recommended diets, primarily because most of these recommendations call for a significant reduction in the amount of meat citizens consume.

"In general, meat is worse than other types of food because every time something eats something else, you get a loss of energy," Behrens said.

"Eating any animal is going to have more of an impact compared to other food groups."

Poorer countries such as India and Indonesia would see their environmental impact go up, mostly because the nationally recommended diets call for more calories than many citizens consume in those countries.

Still, the overall effect, if everyone followed nationally recommended diets, would be a decrease in greenhouse gases, eutrofication and land use, he said.

A few [countries](#), including Britain, Switzerland and China, have acknowledged that their dietary recommendations will also help create a healthier Earth, but that message is rarely conveyed to citizens, Behrens said.

He thinks it's a lost opportunity.

"Dietary recommendations can be a great way to talk about human health and the health of the environment," he said. "The main point is you can win both ways."

More information: Paul Behrens et al. Evaluating the environmental impacts of dietary recommendations, *Proceedings of the National Academy of Sciences* (2017). [DOI: 10.1073/pnas.1711889114](https://doi.org/10.1073/pnas.1711889114)

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