

Study probes connection between diet quality and environmental sustainability

October 29 2020, by Adrienne Berard



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A healthy diet means a healthier you, which also means a healthier planet, right? Well, it's complicated.

Zach Conrad, assistant professor of nutrition in the Department of Kinesiology & Health Sciences at William & Mary, is the lead author on a study that challenges common perceptions about the link between [healthy eating](#) and environmental sustainability. In fact, his research shows that healthy diets can have positive and negative influences on the environment.

"What we found was that healthier diets are not always more sustainable," Conrad said. "In fact, in some cases, some healthier diets can increase use of critical resources like water."

Conrad and his co-authors, Nicole Tichenor Blackstone of the Friedman School of Nutrition Science & Policy at Tufts University and Eric Roy of the University of Vermont, calculated the resource use of food that is consumed plus all of the food that is wasted at the grocery store and in the home, as well as the inedible parts like banana peels.

All told, they found that healthier diets are sometimes better for the environment and sometimes worse—it depends on how a healthy [diet](#) is defined and which parts of the environment are the focus.

"Healthier diets tend to have more fruits and vegetables, which don't require much land but do require a lot of other agricultural resources including irrigation water and pesticides. And fruits and vegetables are

often more perishable than other foods, which means they are wasted in higher amounts," Conrad said.

"So it's not just the food itself that is being wasted, it's all the associated agricultural resources that went into making that food," said Roy.

Their findings, published in *Nutrition Journal*, could have implications for the development of sustainable national dietary guidelines, which would require balancing population-level [nutritional needs](#) with the environmental impacts of food choices.

Using a nationally representative study of over 50,000 Americans, the researchers integrated modeling methods from nutritional epidemiology with food system science to evaluate the linkage between diet quality and environmental sustainability. The goal was to understand the relationship between observed diet quality and the amount of agricultural land, fertilizer nutrients, pesticides and irrigation water used to produce food.

"Our work provides context to public health policy discussions around the healthiness of diets and environmental sustainability," Conrad said.

"Consumers may believe that eating a [healthy diet](#) is a way to reduce their environmental footprint. That is sometimes the case, but not always."

The researchers state that improving diet quality while simultaneously reducing environmental impacts is a "global imperative" and "one of society's most pressing challenges today." Poor diet quality, the paper states, is now the leading behavioral risk factor for [premature death](#), accounting for over 11 million deaths worldwide.

Conrad said that generally Americans need to increase their consumption of fruits, vegetables, whole grains, nuts and seeds—and they need to actually eat what they buy.

"The American public should be advised to reduce their consumption of foods that are high in saturated fat, sodium and added sugar," Conrad said.

"And at the same time, they need to waste less of the foods they purchase," added Blackstone.

The researchers chose to focus on the U.S. because poor diet quality is the leading risk factor for premature death and a predominant risk factor for morbidity. Also, the majority of [food](#) consumed in the U.S. is produced domestically.

"Thus, shifts in [diet quality](#) among Americans would have meaningful implications for [environmental sustainability](#) within U.S. borders and beyond," they write.

More information: Zach Conrad et al. Healthy diets can create environmental trade-offs, depending on how diet quality is measured, *Nutrition Journal* (2020). [DOI: 10.1186/s12937-020-00629-6](https://doi.org/10.1186/s12937-020-00629-6)

Provided by The College of William & Mary

Citation: Study probes connection between diet quality and environmental sustainability (2020, October 29) retrieved 25 April 2024 from <https://phys.org/news/2020-10-probes-diet-quality-environmental-sustainability.html>

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