Restaurant menu design could impact carbon footprint of dining

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A vegetarian pasta dish. Credit: Engin_Akyurt, Pixabay, CC0 (creativecommons.org/publicdomain/zero/1.0/)

A study employing hypothetical restaurant menus suggests that climate-friendly default options and labels indicating the carbon footprint of

each dish may influence diners' dish selections and the resulting environmental effects. Ann-Katrin Betz and colleagues at Julius-Maximilians-Universität Würzburg, Germany, present these findings in the open-access journal *PLOS Climate*.

Previous research has shown that an individual's food choices substantially affect their personal carbon footprint. However, most studies examining factors that influence environmentally relevant food choices have focused on purchasing of groceries eaten at home.

To broaden understanding, Betz and colleagues explored how restaurant menu design might influence diners' climate-relevant choices. They created nine hypothetical menus in order to test two design approaches: carbon labels indicating the amount of greenhouse gas emissions associated with each dish, and—for dishes with components that could be modified—setting the default component to either a low- or a high-emission option.

In an online study, 256 volunteers each selected one dish from each of the nine hypothetical menus, which varied in cuisine, presence of modifiable dishes, climate friendliness of default options, and presence of carbon labels. One example of such a dish was a couscous salad that could be ordered with beef (high emission), shawarma (poultry; medium emission), or falafel (low emission). This appears to be the first published study to simultaneously explore the effects of default options and carbon labels on food choice.

Statistical analysis of the results showed that participants selected more climate-friendly dishes when carbon labels were present, as well as when defaults consisted of low- rather than high-emission options. These findings are in line with results from earlier studies that explored the two approaches separately.

These findings suggest that restaurant operators could employ both carbon labels and low-emission default options in effort to lower their business's carbon footprint. Meanwhile, the researchers note, more research is needed to inform such strategies, including investigations into interactions between the two approaches, the impact of personal habits—such as vegetarianism—on menu choices, and menu choices in real-world settings.

The authors add: "If we want more climate-friendly restaurant visits, highlighting dish components on a menu can really be an important parameter because it communicates what is normal and recommended. It may also be one of the easiest things restaurant owners can do."

More information: How can carbon labels and climate-friendly default options on restaurant menus contribute to the reduction of greenhouse gas emissions associated with dining?, *PLOS Climate* (2022). DOI: 10.1371/journal.pclm.0000028

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