Confused by whole grain labels on food packaging? Study finds you're not alone

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Credit: Tufts University

Whole grain labels on cereal, bread, and crackers are confusing to consumers and could cause them to make fewer healthy choices, according to the results of a study that tested whether people are able pick out the healthier, whole grain option based on food package labels.

The study, led by researchers at the Gerald J. and Dorothy R. Friedman

School of Nutrition Science and Policy at Tufts University and NYU School of Global Public Health, is published today in *Public Health Nutrition*. The researchers say the findings could help lead to enhancements in food labeling.

A pool of 1,030 U.S. adults, representative of the population, responded to a survey with photos of both hypothetical and real products. The photos showed the products, with various whole grain labels on the front of the package, along with the nutrition facts label and ingredients list for each product. Participants were asked to identify the healthier option (for the hypothetical products) or assess the whole grain content (for the real products).

- For the hypothetical products, 29-47% of respondents answered incorrectly (specifically, 31% incorrectly for cereal, 29-37% for crackers, 47% for bread).
- For real products that were not mostly composed of whole grains, 43-51% of respondents overstated the whole grain content (specifically, 41% overstated for multigrain crackers, 43% for honey wheat bread, and 51% for 12-grain bread). Consumers more accurately stated the whole grain content for an oat cereal product that really was mostly composed of whole grain.

"Our study results show that many consumers cannot correctly identify the amount of whole grains or select a healthier whole grain product. Manufacturers have many ways to persuade you that a product has whole grain even if it doesn't. They can tell you it's multigrain or they can color it brown, but those signals do not really indicate the whole grain content," said first author Parke Wilde, a food economist and professor at the Friedman School.

The packages on the hypothetical products either had no front-of-package whole grain label or were marked with "multigrain," "made with

whole grains," or a whole grain stamp. The packages on the real products displayed the actual product markings, including "multigrain," "honey wheat," and "12 grain."

The study goal was to assess whether consumer misunderstanding of the labels meets a legal standard for enhanced U.S. labeling requirements for whole grain products. The legal standard relates to deceptive advertising, and evidence that the labels are actually misleading—or likely to mislead—consumers can bolster support for regulations.

"With the results of this study, we have a strong legal argument that whole grain labels are misleading in fact. I would say when it comes to deceptive labels, 'whole grain' claims are among the worst. Even people with advanced degrees cannot figure out how much whole grain is in these products," said co-author Jennifer L. Pomeranz, assistant professor of public health policy and management at NYU School of Global Public Health.

Previous research has shown disparities in whole grain intake in the United States, including for example, lower intake for adolescents than for adults, and lower intake for participants in the Supplemental Nutrition Assistance Program (SNAP) than for higher-income non-participants. The authors of the new study found that consumers who were younger, had less education, were Black or African American, or reported having difficulty understanding food labels were more likely to answer incorrectly in the test involving hypothetical products.

The 2015-2020 Dietary Guidelines for Americans recommend that half of all grains consumed should be whole grains. Adequate intake of whole grains has been linked with reduced risk of heart disease, type 2 diabetes, and cancer.

"A large chunk of Americans' daily calories—42 percent—comes from

low quality carbohydrates. Consuming more whole grains can help change that, but the policy challenge is to provide consumers with clear labels in order to make those healthier choices," said co-senior author Fang Fang Zhang, nutrition epidemiologist at the Friedman School.

Limitations of the study include the fact that higher education respondents were moderately over-represented, which means the results are conservative. Also, a formal response rate to the survey cannot be calculated because participants were part of ongoing survey panels and volunteered to respond.

More information: Parke Wilde et al, Consumer confusion about wholegrain content and healthfulness in product labels: a discrete choice experiment and comprehension assessment, *Public Health Nutrition* (2020). DOI: 10.1017/S1368980020001688

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