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**Consumers spent less on candy and desserts when shopping online**

*Online shopping was associated with lower spending on certain unhealthy, impulse-sensitive foods, according to a new study in the Journal of Nutrition Education and Behavior*

**Philadelphia, June 8, 2021** – When shopping online, participants surveyed spent more money, purchased more items, and spent less on candy and desserts than when they shopped in-store, according to a [new study](#) in the [Journal of Nutrition Education and Behavior](#), published by Elsevier.

In recent years, online grocery shopping has grown exponentially. To describe the grocery shopping patterns of people who shopped both online and in-store and evaluate whether shoppers purchased fewer unhealthy, impulse-sensitive items online, 137 primary household shoppers in Maine who shopped at least once in-store and online (with curbside pickup) were studied for 5,573 total transactions from 2015-2017.

“There were differences in both the quantity and types of food purchased when shopping online compared to in-store. When study participants were shopping online, they spent about 44 percent more per transaction, and they purchased a greater number and variety of items compared to when they shopped in-store,” said lead author Laura Zatz, ScD, MPH, Department of Nutrition and Department of Social & Behavioral Sciences, Harvard T.H. Chan School of Public Health, Boston, MA, USA. “We also found that shopping online was associated with reduced spending per transaction on candy, cold or frozen desserts, and grain-based desserts like cookies and cake.”

Spending on sugary drinks and sweet and salty snacks did not change when consumers were shopping online versus in-store. Researchers found that in-store shoppers were spending an average of \$2.50 more per transaction on candy and desserts.



Caption: Online shopping was associated with lower spending on certain unhealthy, impulse-sensitive foods, according to a new study in the *Journal of Nutrition Education and Behavior* (Credit: iStock.com/ Weedezign).

When considering why there was no difference in the online versus in-store purchase of sweet and salty snacks and sugary drinks, researchers hypothesized that these items may not be as impulse-sensitive as originally anticipated despite their prominent placement in endcaps and checkout displays.

“Sugary drinks and snacks might have been a planned purchase for many in our study sample. That would fit with other industry research showing that neither sweet and salty snacks nor sugary drinks are in the top five categories of unplanned food purchases,” said senior author Eric Rimm, ScD, Professor of Epidemiology and Nutrition at the Harvard T.H. Chan School of Public Health.

“With more people buying their groceries online, it will be really important to understand how that impacts the nutritional profile of the foods they purchase,” Dr. Zatz said. “Encouragingly, our results suggest that online grocery shopping is associated with reduced spending on several unhealthy items. However, we’ll want to monitor shopping patterns to make sure sophisticated online marketing tactics, like personalized pop-up ads, don’t override that.” Assessing the evolution of marketing practices in the online grocery setting will be an important area for future inquiry, especially as more consumers use online grocery shopping during the COVID-19 pandemic.

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#### **Notes for editors**

The article is “Comparing Online and In-Store Grocery Purchases,” by Laura Y. Zatz, ScD, MPH; Alyssa J. Moran, ScD, MPH; Rebecca L Franckle, ScD, MPH; Jason P. Block, MD, MPH; Tao Hou, MPH; Dan

Blue, BA; Julie C. Green, MPH; Steven Gortmaker, PhD; Sara N. Bleich, PhD; Michele Polacsek, PhD, MHS; Anne N. Thorndike, MD, MPH; and Eric B. Rimm, ScD (<https://doi.org/10.1016/j.jneb.2021.03.001>). It appears in the *Journal of Nutrition Education and Behavior*, volume 53, issue 6 (June 2021), published by [Elsevier](#).

The article is openly available at [https://www.jneb.org/article/S1499-4046\(21\)00081-6/fulltext](https://www.jneb.org/article/S1499-4046(21)00081-6/fulltext).

Full text of the article is also available to credentialed journalists upon request; contact Eileen Leahy at +1 732 238 3628 or [jnebmmedia@elsevier.com](mailto:jnebmmedia@elsevier.com) to obtain a copy. To schedule an interview with the author(s), please contact Laura Zatz at [laz491@mail.harvard.edu](mailto:laz491@mail.harvard.edu).

An audio podcast featuring an interview with Laura Zatz, ScD, MPH, and other information for journalists are available at [www.jneb.org/content/media](http://www.jneb.org/content/media). Excerpts from the podcast may be reproduced by the media with permission from Eileen Leahy.

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The *Journal of Nutrition Education and Behavior* (JNEB), the official journal of the Society for Nutrition Education and Behavior (SNEB), is a refereed, scientific periodical that serves as a resource for all professionals with an interest in nutrition education and dietary/physical activity behaviors. The purpose of JNEB is to document and disseminate original research, emerging issues, and practices relevant to nutrition education and behavior worldwide and to promote healthy, sustainable food choices. It supports the society's efforts to disseminate innovative nutrition education strategies, and communicate information on food, nutrition, and health issues to students, professionals, policymakers, targeted audiences, and the public.

The *Journal of Nutrition Education and Behavior* features articles that provide new insights and useful findings related to nutrition education research, practice, and policy. The content areas of JNEB reflect the diverse interests of health, nutrition, education, Cooperative Extension, and other professionals working in areas related to nutrition education and behavior. As the Society's official journal, JNEB also includes occasional policy statements, issue perspectives, and member communications. [www.jneb.org](http://www.jneb.org)

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