

Research Rundown

Article:

Nutrient Content and Compliance with Sodium Standards in Elementary School Meals in the United States Pre- and Post-COVID-19

What did this study examine?

The objective of this study was to determine the **alignment of school meals** with USDA **sodium targets** before, and in the presence of, the COVID-19 pandemic waivers. It also examined differences in **nutrient content** by region and urbanicity. Four weeks of School Breakfast Program and National School Lunch Program menus were collected from 128 districts in the fall of 2019 and spring of 2022 to provide a robust menu cycle for each time period. The study examined the menus for the nutritional content of the following nutrients:

- calories
- total fat
- saturated fat
- sodium
- total sugar
- fiber

Key findings:

This study found that compliance with school meal standards was largely maintained. Sodium levels slightly decreased by **9.3%** for breakfast and **4.8%** for lunch. Additionally, most weeks (and average daily meals) met sodium Targets 1 and 1A for breakfast and lunch; however, this decreased when condiments were included. Compliance with breakfast was higher than lunch for all targets, particularly with Targets 2 and 3. Regional differences were observed with variations by nutrients and differences by urbanicity were also found; specifically, rural school districts served meals with higher sodium, total sugar, and fiber levels.



Condiments were a **key contributor** to **sodium**, with salad dressing often adding approximately **300–650 mg** to vegetable dishes.



Sodium levels **decreased** slightly between 2019 and 2022 with over **85%** of daily school district meals meeting Target 1 and 1A sodium standards.



Sugar in school meals is similar to a 2021 study by Fox et al. that found that **92%** of schools **exceeded** the Dietary Guidelines limits on added **sugars** at breakfast and **70% exceeded** at lunch.

Put it into practice!



Upgrade your condiments! Offer lower-sodium condiments as an easy first step. When serving salads, be sure to incorporate lower-sodium salad dressing



Check your vegetables! Incorporate fresh, frozen, or canned vegetables with no salt or sauce added. Rinse salt-added canned vegetables with water to reduce the sodium content.



Try a savory breakfast once per week! Reduce sugary breakfast items by including a savory option in your breakfast menu. Breakfast burritos are a favorite!

Reference:

Chapman, L. E., Richardson, S., Harb, A. A., Fear, E., Daly, T. P., Olarte, D. A., Hawley, M., Zukowski, E., Schwartz, C., Maroney, M., & Cohen, J. F. W. (2022). Nutrient Content and Compliance with Sodium Standards in Elementary School Meals in the United States Pre- and Post-COVID-19. *Nutrients*, 14(24), 5386. <https://doi.org/10.3390/nu14245386>



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