

Study hints healthier school lunch can reduce obesity

February 13 2023, by Jonel Aleccia



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A 2010 federal law that boosted nutrition standards for school meals may have begun to help slow the rise in obesity among America's children—even teenagers who can buy their own snacks, a new study

showed.

The national study found a small but significant decline in the average body mass index of more than 14,000 schoolkids ages 5 to 18 whose heights and weights were tracked before and after implementation of the Healthy, Hunger-Free Kids Act of 2010.

The study is new evidence that improving the quality of school meals through legislation might be one way to help shift the trajectory of childhood obesity, which has been rising for decades and now affects about 1 in 5 U.S. kids. Whether the program has begun to turn the tide for the whole country, and not just the groups of kids studied, is still unclear. About 30 million children in the U.S. receive school lunches each day.

"You have the potential to really impact their excess weight gain over the course of their entire childhood," said Dr. Aruna Chandran, a social epidemiologist with the Johns Hopkins Bloomberg School of Public Health. She led the study published Monday in the journal *JAMA Pediatrics*.

The Healthy, Hunger-Free Kids Act of 2010, championed by former first lady Michelle Obama, was the first national legislation to improve school meals in more than 20 years. It increased the quantity of fruits, vegetables and whole grains required in school meals.

The new study analyzed nationwide data from 50 cohorts of schoolchildren from January 2005 to August 2016, before the law took effect, and data from September 2016 to March 2020, after it was fully implemented. Researchers calculated kids' body-mass index, a weight-to-height ratio.

It found that a body mass index for children, adjusted for age and

gender, fell by 0.041 units per year, compared to before the law took effect. That amounts to about a quarter of one BMI unit per year, Chandran said. There was a slight decline in kids who were overweight or obese, too, the study showed.

One way to think of the change is that for a 10-year-old boy with an elevated body-mass index, the decline would amount to a 1-pound weight loss, noted Dr. Lauren Fiechtner, director of nutrition at MassGeneral Hospital for Children in Boston, who wrote an editorial accompanying the study.

"This is important as even BMI flattening over time is likely important," she said. Holding kids' weight steady as they grow can help keep obesity in check.

Previous studies have shown weight-related effects of the federal law among children from low-income families. The new study is the first to find lower BMI in kids across all income levels.

At the same time, significant decreases in BMI measures were seen not only in kids ages 5 to 11, but also in those age 12 to 18.

"That's an incredible shift," Chandran said. "These are kids who potentially have their own autonomy to buy their own snacks."

The new results come within days of the release of [updated standards](#) for school meals, including the first limits on added sugars, decreased sodium and increased flexibility for whole grains. Agriculture Secretary Tom Vilsack said the study shows that healthy school meals are "critical for tackling diet-related conditions like obesity."

But some researchers cautioned against interpreting the study's findings too broadly. Some of the children included in the study might not have

been enrolled in school meals programs, or their district may not have fully implemented the nutrition requirements, said Kendrin Sonneville, associate professor of nutritional sciences at the University of Michigan School of Public Health.

Significantly, measures like BMI, even when adjusted for children, "should not be used as a proxy for health," she added.

A slight reduction in those measures, she said, "doesn't tell us whether the health, well-being, concerns related to food security of children participating in the school breakfast or lunch program improved."

More information: Aruna Chandran et al, Changes in Body Mass Index Among School-Aged Youths Following Implementation of the Healthy, Hunger-Free Kids Act of 2010, *JAMA Pediatrics* (2023). [DOI: 10.1001/jamapediatrics.2022.5828](https://doi.org/10.1001/jamapediatrics.2022.5828)

Lauren Fiechtner et al, The Healthy, Hunger-Free Kids Act and Children's Body Mass Index Outcomes, *JAMA Pediatrics* (2023). [DOI: 10.1001/jamapediatrics.2022.5834](https://doi.org/10.1001/jamapediatrics.2022.5834)

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Citation: Study hints healthier school lunch can reduce obesity (2023, February 13) retrieved 17 May 2024 from <https://medicalxpress.com/news/2023-02-healthy-hunger-free-kids-linked-bmi.html>

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