



ECHO

Environmental influences
on Child Health Outcomes

A program supported by the NIH

Study Summary

Changes in body mass index among school-aged children before and after the Healthy, Hunger-Free Kids Act

Authors: Aruna Chandran, Emily Knapp, et al.

Who sponsored this study?

This research was supported by the Environmental influences on Child Health Outcomes (ECHO) Program, Office of The Director, National Institutes of Health.

What were the study results?

The study showed an overall decrease in BMI in the first few years following the implementation of the HHFKA compared to BMI in the decade prior to the program. Among children ages 12-18 years, who may have more autonomy in purchasing their own lunches or snacks during the school day, BMI decreased from year to year following the start of the HHFKA. This was a reversal of the trends seen during the decade before the program, during which adolescent BMI was increasing each year. This study also supported findings from previous studies that found the HHFKA had a positive effect on the health of children from lower-income families by contributing to an annual decrease in their BMI.

Footnote: Results reported here are for a single study. Other or future studies may provide new information or different results. You should not make changes to your health without first consulting your healthcare professional.

What was the study's impact?

The National School Lunch Program and School Breakfast Program (NSLP) provides free or low cost meals to over 30 million children annually, providing an estimated 50% of students' caloric intake each school day. This study found that the HHFKA was associated with decreases in child and adolescent BMI. Increasing BMI trends before the HHFKA was implemented were stopped or even reversed in several populations after the law was implemented, which could critically influence their long-term health. The study also found that the implementation of the HHFKA decreased BMI of children from lower-income families, who are more likely to participate in the NSLP and are at higher risk of obesity. Accessibility to school meals and snacks represents a key opportunity for intervention to combat the childhood obesity epidemic.

Why was this study needed?

Childhood obesity is a serious health concern with long-term consequences for health and quality of life. Nearly 1 in 5 children in America is obese. The 2010 Healthy, Hunger-Free Kids Act (HHFKA) was the first legislation passed in nearly 3 decades aimed at improving the nutritional quality of breakfast, lunch, and snacks sold at schools. Studies have shown that the HHFKA has improved the quality of school meals

without affecting cost or program participation, but only a few small studies have explored whether the HHFKA reduced body mass index (BMI) in children over time.

Who was involved?

This study included 14,121 children from the ECHO Program between the ages of 5 and 18 who had at least one height and weight measurement recorded between January 2005 to March 2020.

What happened during the study?

Researchers used height and weight measurements from children across 50 ECHO cohorts to calculate each child's BMI and adjusted each measurement based on age and sex. They used these data to evaluate yearly BMI trends from before and after the implementation of the Healthy, Hunger Free Kids Act in September 2016.

What happens next?

Future studies are needed to further explore and verify the effect of improving the nutritional quality of school meals on childhood obesity. In addition, policymakers could use data from studies like this to evaluate policies related to improving the nutritional quality of meals provided in schools.

Where can I learn more?

Access the full journal article, titled "Changes in Body Mass Index Among School-Aged Children Following Implementation of the Healthy, Hunger-Free Kids Act," in *JAMA Pediatrics*.

The content is the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.