



ECHO

Environmental influences
on Child Health Outcomes

A program supported by the NIH

Study Summary

Changes in Body Mass Index (BMI) during the COVID-19 Pandemic

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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.

Why was this study needed?

Childhood obesity is a serious health condition that can affect long-term health and quality of life. There was concern among researchers and doctors that the COVID-19 pandemic may cause incidence of childhood obesity to increase due to the closure of schools and cancellation of recreational activities, leading to less physical activity and changes in eating habits.

Who was involved?

This study included 1,966 participants ages 2 through 18 years old from 38 ECHO cohorts across the United States.

What happened during the study?

The researchers compared annual changes in children's body mass index (BMI)—a measure used to estimate body fat—before and during the pandemic. The researchers also took into account child's age, sex, race and ethnicity, pre-pandemic BMI, mother's education, and household income.

What were the study results?

Results from this study show that during the COVID-19 pandemic, children gained weight at an increased rate compared to the years before the pandemic. Children who had obesity before the pandemic gained weight at a faster rate during the pandemic compared to children who were in a healthy weight range pre-pandemic. Children in higher income households were at a lower risk of excess weight gain during the pandemic.

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.

Impact

This study highlights the need for programs and services to prevent and reduce the physical and mental health effects of the COVID-19 pandemic on children.

What happens next?

Future studies should explore strategies to support families during the COVID-19 pandemic. As the pandemic continues to alter children's lives, it will be important to monitor changes in health outcomes among children and use these data to build programs to reduce health inequities.

Where can I learn more?

Access the full journal article, titled "Changes in BMI during the COVID-19 Pandemic" in [Pediatrics](#).

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