

Study Summary Studying the Effects of Preterm Birth and Environmental Exposures on Child Health Outcomes

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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?

Infants who are born premature (before 32 weeks of pregnancy) are at a high risk for multiple health disorders. This review paper outlines resources available within the ECHO Program for researchers seeking to study the effects of preterm birth and environmental exposures on child health outcomes.

Who was involved?

This review article includes ECHO cohorts that enrolled infants who were born premature. These cohorts enrolled almost 1,800 preterm infants across 14 states that were born between April 2002 and March 2020, including three ECHO cohorts that are almost exclusively comprised of preterm infants.

What happened during the study?

A team of experts reviewed the characteristics of the ECHO cohorts that are collecting data on preterm infants. Through this review, they sought to describe the research goals, participant selection criteria, key environmental exposures, and child health outcomes of each cohort.

What were the study results?

ECHO researchers are collecting extensive data from very preterm infants, including data on learning and intellectual impairments, asthma, obesity, sleep health, and the effects of the COVID-19 pandemic. This article provides an overview of how data from ECHO cohorts are being used to address questions about the combined effects of preterm birth and environmental exposures on child health outcomes.

Impact

Researchers can use the information in this review to enhance their knowledge of the ECHO Program's resources to study preterm infants. Researchers can use ECHO data to investigate the relationship between preterm birth, environmental exposures, and childhood risk of chronic and developmental health conditions.

What happens next?

ECHO researchers will continue to investigate early life factors and environmental exposures that may affect children's health outcomes later in life. Researchers not participating in the ECHO Program will be able to obtain de-identified data from preterm children in the ECHO-wide Cohort, along with data from around 30,000 children born at term through a controlled-access public use database. This data will include information about a broad range of environmental exposures and outcomes related to chronic illness among children in the United States. Using this data, researchers can continue to build off of ECHO's mission to enhance the health of children for generations to come.

Where can I learn more?

Access the full journal article, titled "Environmental influences on Child Health Outcomes: Cohorts of Individuals Born Very Preterm," in <u>Pediatric Research</u>.

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